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Rationale of the Treatment of Fever

THREE methods of treating fever divide the favor of the American doctor today. The application of cold, the use of the coal-tar preparations, and the group of vasorelaxants represented by aconitine. Each of these possesses value and any one may be employed when the special conditions are present for which it in particular is best adapted.

Hyperpyrexia in itself constitutes a danger, apart from its cause. The human brain will not long endure with impunity a temperature above 105 degrees. When, as in sunstroke, scarlet-fever, measles, and septicemia, the heat rises to 110 degrees or higher, we must reduce this with the utmost speed, or the patient will die, his cerebral centers paralyzed. If cold can be had, that should be applied at once, and in such a manner as to be effective. Since the production of heat is stimulated by the sudden application of cold, this method has long since given way to that introduced by Ziemssen—which, briefly, is as follows:

The patient is placed in a tub containing water of about his own (fever) temperature, and then cold water is poured in slowly until the patient is cooled down to below 103° F., or to a safe point. If, however, the patient is too ill to be moved from bed to tub or if skilled attendants are not available for the bathing, we prefer a method introduced by McCall Anderson, a clinician of Glasgow: The bedding is arranged so that the patient's abdomen may be bared without exposing the rest of the body. Now a folded towel is dipped into a basin holding ice and water, wrung out so that it just will not drip, and

applied to the patient's abdomen. Then it is at once covered with a dry, warm flannel, after which the blankets are at once replaced. In one minute the compress is whipped off and a fresh one applied. And this changing is repeated thirty times inside half an hour out of each successive two hours.

This latter method is effective, even in very high fevers, and far less disturbing to the patient. It may be kept up as long as the fever rises above 103 degrees; care must be taken that the cold water does not drip over the bed or the patient's clothing.

For a number of years we depended mainly upon the coal-tar antithermics—acetanilid, antipyrin, and acetphenetidin. These agents sedate the heat-centers and increase cutaneous radiation by dilating the capillaries of the skin, but they do not increase elimination. They are protoplasm poisons, and they form methemoglobin. In overdoses, they cause disquieting symptoms—cyanosis and alarming collapse, and even have been the cause of deaths. They certainly reduce high temperatures, but the curative result is not marked and their use is now limited to cases where the high temperature constitutes a temporary danger, which they meet powerfully and promptly.

Antipyrin being soluble in its own weight of water or of alcohol, it is most convenient for hypodermatic administration. The U.S.P. gives the dose at 4 grains. Acetanilid is the most powerful and the most likely to occasion cyanosis and collapse, and requires 179 parts water to effect solution. Being also cheap, it forms an ingredient of most of the

headache-powders dispensed by druggists without prescriptions. The U. S. P. dose is 4 grains. Acetphenetidin is still less soluble, requiring 925 parts of water. It is the weakest and least dangerous of the group, and is growing in comparative favor. But the whole group of chemical antipyretics has lost its excessive popularity, and no longer is employed with the recklessness of a few years ago.

We now come to the group represented by aconitine, veratrine, and gelseminine. These reduce fever by dilating the cutaneous capillaries and the arteries, thus carrying blood to the eliminant apparatus, allaying cardiac excitement, and depressing the nervous excitability. By virtue of this, there is an increase in the excretions, thus carrying the toxins out of the body. These, therefore, are more than mere temporary allayers of high heat, since they remove the causes of fever by expelling the toxins that irritate the heart and the arteries, causing contraction of the latter and lashing the heart to fury.

It is now recognized that in febrile maladies the danger lies mainly in the toxemia. When the toxins produced by tissue metabolism are reinforced by those generated by the micro-organisms and increased by the high temperature, then we have an accumulation whose disastrous influence over the vital functions is only limited by the rapidity with which these toxins are excreted from the body.

If any agent relaxes vascular tension, it permits more blood to flow to the eliminant organs and increases their excretions; besides, it dilates the cutaneous capillaries and allows a greater radiation of heat from the surface of the body. Ridding the body of its excess of toxins, the nerve-cells and those of the inflamed parts are relieved from the noxious influence exerted upon them by these circulating poisons. The comfort of the patient is enhanced by this means and his chances of recovery are materially increased.

The three alkaloids named possess in varying degrees the properties of vascular relaxants, analgesants, and stimulators of elimination, as well as of nervous sedatives.

Of the three named, gelseminine is most strongly analgesant and sedative to the nerve-centers, aconitine ranking next and possessing a local anesthetic power also, while veratrine most powerfully stimulates elimination. Gelseminine is less antipyretic, and is best suited in cases with little fever but severe headache and cerebral or spinal excitement. It should replace morphine in treating meningeal inflammations. Veratrine finds

its field in eclampsia and when elimination is unusually defective.

Aconitine is the great antipyretic when it is desirable to restrain the temperature within safe bounds, lessening the tissue waste, and preventing the exhaustion that makes for a tedious and complicated convalescence. For, while fever may indeed be a salutary process and serve to restrain microbic operations, it nevertheless is apt to pass the limits of the useful and so do more harm than it does good. Men prate of nature doing the work, without considering that nature's ways are not always directed to the objects we deem desirable. The rains aid our crops, but destructive floods should be restrained. The destruction of tissue and the time demanded for repair are directly proportional to the height duration of the fever.

The control of temperature by the defer- vescent alkaloids is a different proposition from that of the use of cold or of a drug of the antipyrin group. The discovery that fever has its uses, and is not necessarily an enemy to be combated, cast a legitimate doubt upon the value of measures directed exclusively against the symptom, without regard to its causation or meaning. But there is nothing inconsistent here with the control of the temperature within proper limits, and especially when this is done by the elimination of the toxins that are now recognized as the principal source of peril.

Clinical observation has established a routine that is followed by many thousands of practitioners: Aconitine is taken as the basis of the standard prescription, with a minimal dose of the water-soluble cardiotonic principle of digitalis, digitalein, to further the inhibitory action of aconitine and steady the heart, guarding against its coming weakness. If elimination is notably deficient or the fever shows the sthenic type, veratrine is added. But, if debility is manifested, the asthenic type predominating, strychnine arsenate is given with the basal couple. Arsenic is selected on account of its antiparasitic powers and its action in favoring the disintegration and absorption of the debris resulting from the disease.

We thus have two triad combinations, and the varying indications in a given case allow us to change from one to the other and back again at will, forming the most readily adaptable and flexible system of coping with fever ever devised.

The physician who has tried this method does not need to be advised of its value. There are still some who

have not tried it—and for them this little dissertation is written.

MALINGERING AND HEALTH-INSURANCE

The success, in Britain, of Lloyd-George's health-insurance scheme has brought to the front, as was to be expected, the question of malingering. With the poor, and especially with the wives of working men, the temptation to secure a few weeks' rest at the expense of the club or the employer is great, indeed. Those who have not had the opportunity to observe this class closely can have little idea of just how much this means: A woman who had engaged this writer to attend her in an approaching confinement was seized with the pangs of parturition while she was scrubbing the stairs, and the baby was born then and there. Upon the writer's arrival, he found the woman in bed, the baby washed and dressed, through the kind assistance of a neighbor. When the probability was mentioned that the mother probably would be up and at work again the next day, she strongly demurred, for she was "entitled to nine days in bed" and purposed to have it; "that is the reason I am having the child!"

Every physician who has had the medical direction of sick-benefit societies has had this trouble to deal with—that, if he is lenient, the club is plundered and plunged into bankruptcy; while, when he is strict, those he refuses to put on the benefit list combine to overthrow him. Evenhanded justice generally appeals to the majority, if the physician really goes to the trouble of making an unquestionable diagnosis. If the applicant is shown his wrong so plainly that he can not but admit it, he is satisfied, provided he knows that no other member is more favored. But deference to influential members or personal friends is sure to bring its just retribution.

The scenes witnessed in the trial of suits for personal damage are not edifying or pleasant to him who holds the honor of his profession dear. Between the physician who tries to aid his patient to swindle a corporation and the "expert" who tries to aid the corporation in evading a just recompense for injury inflicted through the corporation's fault there may be little to choose; but anybody who has ever witnessed the despicable attempts of the corporation to shirk its liabilities, even stooping to assaults on the unfortunate victim's reputation, will in so far sympathize with the latter as to give him the benefit of any doubt that may be entertained.

Wherever there arises a question of malingering the decision should lie with medical witnesses who are in a position of absolute independence. The well-paid expert who is an employee of a company should not be heard. The struggling young practitioner who dares not refuse an influential patient should be replaced by one who has nothing at stake in the matter. The decay of public spirit and individual honesty demand that such matters be placed in the hands of government officials, public functionaries, who perhaps may be found less susceptible to improper influences and more judicial in their attitude to the questions and parties at issue than the private physician.

If you'll sing a song as you trudge along
You'll see that the singing will make you strong.
And the heavy load and the rugged road
And the sting and the stripe of the tortuous goad
Will soar with the note that you set afloat;
That the beam will change to a trifling mote;
That the world is bad when you are sad,
And bright and beautiful when glad.
That all you need is a little song—
If you sing the song as you trudge along!
—R. McClain Fields.

INTESTINAL DISINFECTION IN TREATING GOITER

England has discovered the intestinal-antiseptic theory, and in due time we may expect her to unearth the sulphocarbolates also. England is getting "warm."

Major McCarrison, of the Indian Medical Service, tells, in *The Lancet*, some interesting observations of the treatment of parenchymatous goiters. Thymol was the agent selected. Of 100 cases, 82 were kept under observation, to show final results; 68 patients were cured, 14 of the number were little or not at all improved. Naturally, the earlier cases proved most amenable; because deranged functions are less resistant than material lesions.

Neither fats, alcohol or vinegar should be allowed when giving thymol, as these are solvents for it. One striking result of the treatment is the loss of the subcutaneous fat. Thymol is ranked by Ratimoff fourth as a germicide, after mercuric chloride, silver nitrate, and iodine—the latter the standby in treating goiter. It is probable that this reputation is largely due to the germicidal power of iodine.

Eight patients were treated with the Bulgarian bacillus, with very striking results. Four were cured, two improved, though two showed no change after six weeks' treatment.

The thyroid gland began to shrink and the patients to lose weight about the tenth day.

The next step was the employment of vaccines prepared from bacteria found in the feces of the patients. One was a composite vaccine made from such organisms as grow on Musgrave's agar; the second was from the patient's own strain of coli; the third, from a spore-bearing organism found in the feces of a goitrous pony. The results from all were pronounced very remarkable. Equally striking results were then obtained from a vaccine derived from a staphylococcus derived from bone caries.

Under all these forms of treatment the patient grew thin and the skin became of a healthier tint.

The evidence points strongly to the intestinal tract as the home of the infective organism causing goiter.

Console yourself, dear man, and brother; whatever you may be sure of, be sure at least of this, that you are dreadfully like other people. Human nature has a much greater genius for sameness than for originality.—James Russell Lowell.

THE WATERLOO OF THE QUACK

Dr. Edward B. Rogers closes a study on the treatment of acne by bacterins, in *The Journal of the Medical Society of New Jersey* for December, by expressing his desire to stimulate interest and study in this line of treatment, not only of acne, but of all other germ-diseases. When this occurs, the author says, the physician will be given his proper recognition and the various quacks will meet their deserved Waterloo.

Although in some ways the pious wish expressed in this prediction might be echoed, I cannot feel quite so sanguine as Dr. Rogers, nor do I think that, for some reasons and at least for the sake of physicians themselves, the extinction of the species quack would be a good thing absolutely, because it is the trials and tribulations (and the quack is constantly a thorn in the flesh of the physician) that bring out and develop our fighting qualities and make us do our best.

If Dr. Rogers had meant the quack in the ranks of the "ethical" medical profession, I should echo his hope, but in both instances I should not agree with him. Do not imagine for one moment that the quack, especially the avowed quack, the advertising physician, is so blind to his interest, which is frankly expressed in dollars and cents, as to overlook any such good thing as the etiologic treatment of infectious diseases. It was by the quacks

that "606" received its greatest notoriety; it's the quacks who use, though sometimes discredit, bacterins and sera. They are shrewd enough to be good students, in the majority of cases, and they study the important therapeutic literature more closely and to better purpose than do the majority of physicians.

However desirable it may be that the treatment of infectious diseases by bacterins and by serums be studied, and however desirable it is that the quack, in so far as he assumes the interests of the patient as subordinate to his own, meet his Waterloo, it is not in the field of medical endeavor that he can ever be brought to that pass. The quack can be removed to a greater extent only by the perfecting of the profession and by the education of the public.

NEWSPAPER MIRACLES

Don't believe all you read. Don't believe any of it, unless you have reason or proofs satisfactory to you and find that the asserted miracles are capable of assimilation with previously known and accepted fact. There are always innumerable people who are ready to accept anything at all with enthusiasm and wait indefinitely for the proofs.

In the days of Montgolfier the forbears of this class thought the realm of the air was conquered, but despite the strides since taken by the aeronauts the privacy of the sylphide queen is not seriously disturbed, and the life-expectancy of the birdman is not as yet alluring to the insurer of lives.

The newspaper looks for sensations, and the skilled work of the ordinary practitioner in obviating the effects of disease and prolonging life presents nothing attractive to him. The brilliant achievements of the surgeon and the astounding claims put forward by the experimenter are just in his line.

One learned editorial writer in the daily press has made some discoveries along this line. He has made the discovery that the surgeons are fastening broken bones by the insertion of nails! This is surely new—or was new once; but so long, long ago that the present writer scarcely would dare hazard a guess. The journalist might read up in the past history of medicine with advantage—indeed, he would almost surely resurrect some similar marvels that have been forgotten by us. This same newspaper scientist also finds that new jaws of silver may replace a useless inferior maxilla, so perfected by modern science that it aches when the bearer gets his feet wet!

Moral degenerates are made over by remodeling the brain and become "sane, clear-headed, and healthy." Perhaps—we note in a recent paper that one of the criminals thus reformed had inconsiderately suffered a relapse into crime. Stupid, backward children are made normal by that most wonderful man, the "modern surgeon"; who removes the obstructing stones from the bed of the life-stream. "If your child seems weak-minded," send for the surgeon. Beyond a doubt he will find some excuse, if not reason, for operating.

What a pity it would be to spoil such a pretty tale by asking for statistics as to the actual results of these interventions. Not that we wish to discourage the removal of adenoids and hyperplastic tonsils—by no manner of means—it is a duty, fully justified. But when Mr. Serviss, of newspaper fame, after alluding to skin-grafting as another new thing, or mentions the transplantation of a rabbit's cornea, he should have added, to avoid arousing false hopes, that as yet the result has ended invariably in failure. And while the doctor may have transplanted a leg from one dog to another, and with complete success, we should like to ask how long a time has elapsed, and whether the success has been sustained. Also, do not rashly conclude that this can be repeated with human subjects. The lizard may grow a new tail as often as the old one is snapped off, but we are not lizards.

This sounds grouchy, doesn't it! But, really, it is nothing of the sort. I do not envy the surgeons a mite of their success; and am only too glad to see them accomplish anything that may lessen the load of human woe. But it galls one to see them occupy the lime-light with their striking work, much of which is the crudest playing to the galleries, and very much mere experiment and turns out badly in the end.

Meanwhile the real hero is the man who goes on year after year doing the finest work of the profession and never gets a plaudit, is never heard of beyond his limited circle, and is generally unaware of his own splendid qualities and achievements. There is a hundred times more skill and knowledge demonstrated in taking a patient through a severe attack of typhoid fever than in doing the most delicate surgical operation. The problems of vitality, of metabolism, of nutrition, of sustention, of toxemias and elimination, of the powers of drugs and the patient's reaction with them, the control of patient, nurses, family, and officious friends through

the trying crises mean infinitely more than the technic of any operation.

The surgeon's work is based on a complete knowledge of anatomy; that of the diagnostician upon anatomy, plus physiology and pathology; that of the physician on all these, plus therapeutics and psychology.

"My grandpa notes the world's worn cogs
And says, we're going to the dogs.
His granddad in his house of logs
Swore things were going to the dogs.
His dad amid the Flemish bogs
Vowed things were going to the dogs.
The cave man in his queer skin togs
Said things were going to the dogs.
But this is what I wish to state:
The dogs have had an awful wait."

AUTOINOCULATIONS IN PELVIC INFLAMMATIONS

Harold Chapple advocates autoinoculations in dealing with pelvic inflammations. These rarely are limited to a single organ, but the malady is apt to be more apparent in a particular one. Chapple's observations were made upon patients afflicted with bilateral salpingo-oophoritis with gonorrheal history, such as so frequently necessitate surgic intervention. The article cited appeared in *The Lancet*, January 18.

Recent research has confirmed the claim that inoculations of the actual offending organisms or their products give more beneficial results than are obtainable from stock-vaccines. The great difficulty lies in isolating the causative organisms. A remarkable variety of these is found on swabs from the vagina and cervix, and Chapple has not been able to divide the tract into two zones with distinct floras. Despite a clear history, the gonococcus is difficult to isolate or even to detect.

Increase the blood supply to an infected area, and we liberate more toxins into the general circulation. Raise the local temperature of the pelvis, and an autointoxication capable of sufficiently accurate control is effected. Regulate the doses so as to give the second when the negative phase of the first is over, and the positive phase has been entered definitely. By this we raise the patient's index of immunity to the offending organisms, and markedly increase her ability to cope with them and their products.

If we are dealing with an inflammatory mass the causal organism of which is dead, the increase of vascularity aids absorption. The congestion is easily produced by several electric lamps surrounding the pelvis. Do not

cover the trunk and limbs. After a few days the heat may be raised to 180° F. for a half hour. The introduction of a Ferguson speculum facilitates the raising of the vaginal temperature. In one case, with the bath-temperature at 180°, the vaginal speculum at 135°, the posterior fornix was 101.5° and the mouth 98.8° F.

The examples quoted are not especially striking. The results are not as good as we used to get from rest in bed, depleting suppositories, systemic absorbents, intrauterine applications of thymol iodide, and intrauterine galvanization. The true importance of the newer methods lies in the possibility of still better results following their development.

Add to the old treatment saturation with the sulphides of calcium and of arsenic, and rarely will any of the new methods be required. Nevertheless there undoubtedly are cases of pelvic inflammation in which proper local and internal drug medication can be supplemented to the best advantage by the use of autogenous or stock vaccines. Bacteriotherapy and drug therapy are not opposed—they should be associated.

There is a perennial nobleness, and even sacredness, in work. Were a man ever so benighted, or forgetful of his calling, there is always hope in him who actually and earnestly works; in idleness alone is there perpetual despair.—Thomas Carlyle.

COCAINOMANIA

Public opinion in France has been excited by the discovery in Paris and Lyons of numerous cases of cocaine habituation, according to *Le Monde Médical*. While there are many opium users, these do not excite as much attention, because the victims indulge in the seclusion of their homes, while the cocaine-maniac is easily recognized by his actions. If one wishes to poison himself at his leisure he should choose an agent that does not attract attention.

There are some who can not pass by any alkaloid that may afford them new sensation. To opium, morphine, ether, long used in this manner, they add heroin, invented expressly to cure morphinism. As soon as pantopone was made known, pantoponomania immediately was forthcoming.

Yet, France need not complain. In America the ravages of cocaine are much greater. Some of the states have passed laws seeking to lessen the evil. But why cocaine?

Some cocaine-maniacs are made such by the use of this alkaloid to relieve nasal affections. They are few, and if they use only the pre-

scribed solutions, they are in no danger, those cures being too weak. In France cocaine is not employed in such affections, but here it is all too commonly applied in treating complicated catarrhs, irritant bronchial troubles, and so on. Crothers has pointed out that these persons experience only the sense of normal well-being when under the influence of this drug.

Another cause of cocaine-mania is demorphinization. It is not easy to say just why patients ridding themselves of one drug fall so readily into the habit of using another. Possibly they have grown to like the sensation of being empoisoned. They take on any new one, and love to consider themselves cured when they are not. This class is numerous.

Still more numerous are those who take on cocaine but do not stop their morphine. The accumulation of toxins is characteristic of the toxicomaniac. Most of these give themselves to cocaine, morphine, opium smoking, ether, chloral, and especially to alcohol. It is a common saying that cocaine leads to drink. There results a more complicated symptomatology, and troubles of extraordinary complexity.

Undoubtedly, having experienced from the first of these toxins sensations which they consider agreeable, they wish to double the dose and to vary the sensations. We must distinguish between agents that are depressing and those that excite, such as alcohol and cocaine. Such patients often alternate these or associate them; and they employ injections of morphine with cocaine in one solution. This is the custom of neuropaths more or less degenerated or in the way of degenerescence. They are subjects to whom all new sensations, even if disagreeable, are welcome, provided they are sensational or at least original. They are those of whom we no longer number the eccentricities, generally but slightly intelligent, very often debased. They are disequilibrates, in rapid march toward mental troubles, definitive, or at least grave.

Among them the first place is to be assigned to artists and litterateurs who place strangeness of life and ideas before talent. Adepts of schools without partisans, inventors of abracadabrant technics, they demand from the artificial excitations of toxics the thoughts they otherwise completely lack. Imitators of preceding geniuses in the less desirable sides of their lives, they judge themselves capable of writing the "Nights" or the "Fetes Galantes," because they have absorbed absinthe; to compose the "Flowers of Sin,"

under the pretext that they are, like their author, in search of ephemeral paradises, or they believe that in smoking formidable quantities of cigarettes they have the genius of the author of "Wisdom." For an instant of slightly productive exaltation they place themselves in line for the absolute intellectual void to which their incurable weakness would have conducted them without such aid.

Crothers has shown how much cocaine is used by criminals. This drug gives to them a certain assurance in the accomplishment of their nefarious work and arms them with force for the delicate instants passed before the judge. Yet, it must not be forgotten that cocaine induces very particular mental disorders, assuming the violent form and conducting its votaries to crime. Possibly there is an involuntary confusion between the reciprocal influence of the toxic and the reprehensible acts.

But there is evidently one etiologic factor that dominates the problem, in contagion. The idle, the neuropaths, the sick, all are of feeble will, incapable of resisting a bad example offered under attractive forms. We know that the habitués are zealous propagators of their own bad habits. We see the smokers of opium make great efforts to recruit new adorers for the smoke of the East. We know how alcoholics have the tendency to entangle those who have not yet sacrificed to their own appetite. Morphinomaniacs are no exception. But opium and morphine induce a certain reserve.

Unhappily these is no such thing with cocaine. Complicated procedures entail a certain discretion which prevents making new victims. Taking a dose from a little vial is the acme of simplicity. There is no abnormal taste to which one must familiarize himself, as with chloral and ether. At any time, if the toxin is at hand, one may deliver himself to the intoxication without preparation or precaution and without attracting attention. What could one find better—or rather worse?

The dangers of cocaine are graver for society, if not for the individual, than those of other toxics; intoxication with it is easier, and the habit one of the most difficult, say the specialists, to cure.

STRIKES, AND TAX DISTRIBUTION

The medical students in Spain are out on a strike—to compel the government to pay the 'parish' doctors. Hitherto these unfortunates have depended upon the municipal

authorities for their pay, and if, as happened, the latter saw fit to withhold the cash there was no legal redress.

This is an example of a spirit that seems to be growing in prevalence—the tendency to "let George do it." With us, the wealthy malefactor shirks the taxes on his million-dollar residence, and the city finds it has not enough cash to go around; then all the items of expense it can shunt onto the county it cheerfully transfers. The county, in turn, passes all expenses it possibly can along to the state; and the state—it devises ways and means, or maybe excuses, to unload the burden upon the general government.

It all comes to the same thing in the end, of course, for somebody has to pay; still, while we believe devoutly in Emerson's law of compensation, it seems that, to get the individual balance, another world is a necessity—to even up for the imperfections in justice mundane.

"Whatever the weather may be," says he—

"Whatever the weather may be,

It's the songs ye sing, and the smiles ye wear,

That's a-makin' the sun shine everywhere;

An' the world of gloom is a world of glee,

Wid the bird in the bush, an' the bud in the tree,

An' the fruit on the stem o' the bough," says he,

"Whatever the weather may be," says he—

"Whatever the weather may be!"

James Whitcomb Riley.

NEEDED MEDICAL REFORMS

The daily press has taken up the suggestion made by Dr. John B. Murphy, as a member of the committee appointed last November by the American Clinical Surgical Association, to bring about needed reforms in medical legislation.

As is well known, Dr. Murphy suggested the reexamination of physicians every five years. He thinks that no man should be self-assumed surgeon, oculist, gynecologist or aurist, and gives it as his idea that men claiming special skill should be passed upon and certified to by some local or national organization. Dr. Murphy says the public needs the best it can get in the way of medical service, and that the public must be protected, since it is necessarily uninformed and confiding.

We have no quarrel with Dr. Murphy's suggestion in a purely Pickwickian sense, but we are wondering just how it could be brought about that physicians will come up for examination every five years; and, if it is to be made mandatory upon physicians who have passed through a prolonged course of

strict and severe training to be reexamined once in a lustrum, we are slightly c. 2. k. ("curious to know"), as B. L. T. of *The Chicago Tribune* puts it, whether reexamination will be demanded from Osteopaths, Chiropractics, Christian Scientists, advertising quacks, *et id omne genus*, or whether they will be placed in a relatively better or more favorable position than regular physicians.

The public is, indeed, uninformed and confiding. If it were not so, it would not pass by regularly accredited physicians who are honest enough to admit their limitations, and would not be bamboozled so readily and persistently in the face of the most varied disappointments and fleecings which they experience and suffer constantly.

Supposing this additional burden were to be laid upon physicians who, as it is, do not earn as much at present as mechanics (taking the average earnings of the physician to be from \$800 to \$1200 a year), what is the uninformed and confiding public willing to do in return for this increased assurance that its medical advisers keep up with the times and are duly certified?

The public has a fine sense of what is due it on the part of the medical profession, but the selfsame public shows a deplorable lack of consideration and appreciation of the medical profession. It persistently employs the exponents of wild and fanciful methods of "healing" (?) and pays them good money, but when the shekels have given out and nothing further can be done or the chances for recovery are lost, then the regular re-examined and certified physician is called in and is graciously permitted to do, for sweet charity's sake, what his irregular and dishonest competitors have not been able to do; or then the patient, in the care of the physician, loses his life, which might have been spared had the proper counsel been called at the beginning.

"I'm always in favor of givin' thanks—f'r annything. 'Tis a good habit to get into. 'Thank ye kindly' is better than 'bad luck to ye,' anyhow."—Mr. Dooley.

THE STRAIGHT LINE

In the commercial world this is the day of straight lines—straight lines of efficiency in processes and straight lines of dealing with men and women. Elimination is the order of modern business. Straighten out the curves. Cut out all the useless, expensive, clumsy, roundabout methods, both of making products and of marketing them. Go direct to the desired point.

The same slogan may well be raised in practical medicine, especially in therapeutics. Eliminate. Straighten out the curves. Cut out all that is inert, and indirect, and questionable; all that is sheer habit and tradition, with no real value; all the *impedimenta*. Let the path between the remedy and the disease be a straight line.

A propos, a mathematical friend recently called my attention to the inadequacy of the definition of a straight line as "the shortest distance between two points." It is that; but it is more than that.

A straight line is the *only unique* line that can be drawn between two points. All curved lines have their counterpart and can be duplicated in the same plane. But the straight line is the only line that can fall in that plane between two points.

So, this straight-line method of doing things not only is the shortest way—it is the only unique way in which they can be done. Worth thinking about!

READ THIS—OF GREAT IMPORTANCE!

Every physician who receives this number of *CLINICAL MEDICINE* is urged to read with the utmost care the review of the legislative situation now facing the medical profession, as presented on page 430.

The matter discussed on that and on succeeding pages is of vital importance to every physician, and neglect to pay immediate attention to the emergencies presented may result in disastrous consequences to the entire fraternity of this country.

Do not put this number of the journal aside for some other day, but attend to the matter immediately. After you have read this article, it is "up to you" to take whatever action may be indicated in your own state. Do not leave this matter to someone else. *It concerns you.*

TOO MANY DOCTORS

Germany now raises the cry that the universities are turning out altogether too many doctors. Where are these young men to find their living? Why, very obviously, from the patients now under the care of the older men. The said older men do not relish the prospect and very naturally would like to close the doors and keep the newcomers out. Human nature is very uniform.

In the year 1909-'10 there were licensed 945 new doctors; in 1910-'11 the new licenses numbered 1047; and the net increase in

1912 was 692, against 386 the previous year. There is now in Germany one physician for every 1976 persons. In Berlin, one to 888. And still they come. The number of medical students at the schools is also increasing. This summer it rose to 13,380—a gain of about 1500 in a year.

Meanwhile we have been assured that imperial Germany is overrun with quacks, who take away much of the practice—and the fees—from the doctors, and find means of living even when not legally authorized to collect their fees.

In any other vocation we should hear much of the inexorable laws of supply and demand, and be told that the reason for the increase is that the modern German demands more attention from his doctor than did his progenitor who astonished Cæsar by swimming the icy rivers and exterminated the legions of Varus. But it seems wiser to hide the truth, lest more of the youth should feel encouraged to enter the medical profession and make the oldsters get busy and keep up with modern requirements.

How can any one man possibly do his whole duty by 1976 persons, in the light of modern science, medical and surgical.

Don't throw brickbats at your competitors—throw bouquets, and do so every time that you can honestly. It will pay you as well as please the other fellow.

DR. JAMES A. EGAN

It is with profound sorrow that we announce the death of Dr. James A. Egan, secretary of the Illinois State Board of Health, which occurred on March 30, from Bright's disease.

Dr. Egan held the secretaryship of the Illinois Board for sixteen years. During that period the requirements for practice in this state have been steadily advanced—indeed, under his guiding hand Illinois was one of the first to raise its educational standards, as it was one of the first, if not the very first, to provide for a practical system of reciprocity with other states.

Chicago has for many years been the most important medical educational center in the country. Numerous medical colleges have been established in this city—admittedly too many—and naturally some of them have been of a rather inferior grade.

The task of supervising these institutions fell upon the State Board of Health, and most heavily of course upon Dr. Egan himself. Because, we believe, of his constant and consistent effort to be fair to all concerned, and

because also he refused to be dominated in this matter by a certain element of the profession, he was perhaps more viciously attacked than any other medical man who has ever held a state office in Illinois. All kinds of accusations were made against him—some openly, some covertly—but so far as we have been able to learn no evidence has ever been submitted to show that he ever used his office except to advance the interests of the people.

We knew Dr. Egan well, and respected him. Indeed, on the Monday morning following his death we received from him a letter that must have been indited only a few hours before he passed away. In this letter there was no hint of his illness, no suggestion of weakness, but there was a strong statement of his determination to oppose all efforts “inimical to the interests of the medical profession, or tending in any manner to jeopardize the lives and health of the people.” We quote his exact words.

Dr. Egan is dead, and it is not our purpose to take the opportunity to criticise his critics, or to defend the work that he did. In the end, the work is the best testimony to the character of the man, and from this standard Dr. Egan's reputation will not suffer in days to come.

We have always believed in the Illinois Board of Health, which, working under a handicap such as has been placed upon no other similar organization, has kept straight ahead. Dr. George W. Webster, the president of the Board, and Dr. James A. Egan, its secretary, ably supported by a capable membership, have done strong conscientious work and have deserved the approval of the profession of Illinois. We know that the living will carry forward the work which the dead man loved and to which he devoted his life.

THE VENEREAL PERIL

Occasionally it happens that a ray of something akin to common sense illumines the pages of the lay journals when they discuss matters medical or hygienic, a notable instance of this occurring in *The Sacramento Bee*, when V. S. McClatchey takes up the question of the venereal peril.

That writer might be accused of exaggerating the ravages of the two plagues of syphilis and gonorrhea, were it not that he quotes statistics in support of his statements. “Every fifth person in New York City is or has been infected therewith; and there are 250,000 new cases each year. Eighty percent of males between 18 and 30 contract gonor-

rhea; 8 to 18 percent acquire syphilis. These conditions are growing worse. The underlying cause is ignorance.

"The subject is taboo, and most youths obtain their information from very doubtful sources or from sad experience. Syphilis is responsible for 90 percent of locomotor ataxia, for many stillborn and prematurely dying children, for apoplexy, paralysis, and sudden death, long after the original infection may have been forgotten. Gonorrhea, regarded by the youth as a joke, is known by physicians to be far worse than syphilis. It is the leading cause of race suicide from sterility, of 30 percent or more of blindness, of 70 to 90 percent of abdominal operative maladies in women. The germ may be carried dormant by a man for many years, awaking to malignant life in the innocent wife."

The principal means of venereal infection is prostitution. Practically all who study the question agree that it is impossible to extinguish this evil. Were we able to regulate it, much harm would be prevented, especially that which falls upon the innocent women. But there is ever present the devout extremist who objects to the state "licensing vice."

The claim is made, by those who seek a more or less plausible excuse for their derelictions, that men differ from women in requiring a periodic exercise of the sexual function. The boy who has never accustomed himself to its exercise has no need of it; the man who has formed the habit will be relieved naturally if he remains continent. That any man really requires periodic indulgence for his health has never been proved; that very many will thus indulge despite all argument is only too true. We who have to take men as they are, rather than as they might be, well know this. Men almost invariably contract venereal disease while indulging in illicit pleasure; women are, as a rule, innocent victims.

The remedies should be moral, says the author cited—we say, educational. Arouse in the lad a sense of honor, of proud purity, of pride of family or race that will keep him through the period most perilous. The rewards are inestimable.

All over the land there is a rising demand that the ripening youth of both sexes should receive instruction in these matters that would preserve them from falling ignorantly and innocently into these evils. Many excellent little books on these topics have appeared, among the best being those published by Dr. Edith B. Lowry. This gifted woman has the rare art of telling of the most

delicate things in a clear and comprehensible manner, and yet without such brusqueness as would bring the blush to the cheek of innocence.

"Marriage should be restricted to the physically fit." Yes! so easy to say and so impossible to enforce. Men and women rush together as the streams run down hill. The impulse is deeper than law, than reason, than religion, or than any of the influences that govern men's actions.

The use of public drinking cups, of towels, and of pipes causes some infections, and these may be checked by timely and repeated cautioning. Infected persons should be segregated until cured. Liquor should be banished from brothels, as it renders the drinker incapable of protecting himself. The author follows Belfield in advocating the circumcision of all male children, the Jews being notable free from syphilis. Still, it is no protection against gonorrhea.

Prostitution is governed by the law of supply and demand so long as the sex relations are legally controlled—which, of course, they will be. It has never been suppressed by any religion or government. Europe now seeks only to regulate it so as to prevent as much of the evil as possible. Procurers, cadets, macquereaux, graft, slavery, the continuance in the business of the girl who would reform had she the chance, and the ruinous low wages of store girls are matters that should be remedied. It is asserted that east-side girls in New York take to the street to win the means of educating their brothers—the European peasant valuing the sex only as it is capable of furthering male interests.

The registration of prostitutes, their concentration within certain specified limits, systematic examinations, confinement in lock-hospitals while infected, each has its advocates. To all these the objection is raised that they officially recognize and sanction the social vice. Meanwhile many thousands of innocent victims are yearly infected because of the good people's unwillingness to have the government appear to favor this terrible wrong.

The army issues (without saying much about it) to the soldier a device to protect him against infection. This is quite effective. The writer was asked by a manufacturing friend whether he would advise him to take up the manufacture and sale of this device—and he urged the gentleman not to touch it. In the present state of public opinion no one can afford to ignore the worthy although surely mistaken persons who oppose all means

of controlling the ravages of these horrid diseases, except the one of moral restriction—which has been tried for ages and ever proven a dismal failure.

VASOMOTOR DISTURBANCES

The older clinicians laid the greatest stress upon the significance of the pulse, and looked upon it much as the modern internist does upon the urine, that is, as providing an index of the severity of the disease. The strength, volume, rapidity, regularity, and tension of the pulse furnish data of inestimable importance to him who has learned the lessons which it can convey. It provides inestimable information to the therapist, since the remedies that restore the circulation to its normal equilibrium at the same time help to remove the pathologic condition that occasioned the disequilibrium.

Treatment based upon a study of the pulse is not a mere treating of symptoms or a smothering of nature's warning, as where pain is lulled by opiates or sleep is coerced by hypnotics. We may not know exactly what the condition is, in fact we never do know this; but we do know that when the circulation is restored to normal functioning the peril is past.

While we have much yet to learn of the mode of action of disease causes and the mechanism by which their deleterious action is accomplished, modern research has thrown much light upon disease-processes. Thus, we know that in febrile disease, that is, in the acute infections, the danger is due to the degree of toxemia present. When the toxins set free by microorganisms circulate in the blood, they give rise to certain manifestations peculiar to disease. When the toxins accumulate to a certain point, the vitality is affected, and the attack is termed malignant. The peril is increased in any case if the patient's eliminative apparatus is defective, for in even a mild attack the toxins may be retained in the blood until malignancy is developed.

Here is the reason for the superior efficacy of the great sedatives of which aconitine is the type. By relaxing vascular tension, more blood is furnished the eliminants and more toxins are carried out of the body. In case of local plethora, a very curious condition obtains. As the bulk of the blood is not increased, it follows that, whenever any part has more than its share, the rest of the body has just that much too little. In other words, the vascular relaxation that permits

an excess of blood in any part is exactly balanced by vascular spasm in other parts.

Hence it is that one set of practitioners treat local inflammation by sedating the abnormal tension, and another, by stimulating the relaxation. In pneumonia, the former gave antimony or veratrum, the latter, quinine, digitalis, and strychnine, and each secured about equally favorable results; while the expectant, who did nothing, lost more patients than either.

It remained for Burggraeve to make the astounding discovery that still better results were had by combining sedatives and stimulants in the same prescription. I have endeavored to explain this on the hypothesis of a selective absorption by the cells. It seems no more difficult to conceive that a cell may take up the drug it requires to restore normal balance, than that each cell should take from the common supply the iron, lime, fat, phosphorus or other elements needful.

This theory is proffered to account for the fact, abundantly proved, of the superior efficacy of the combination of aconitine and digitalin in treating fevers. This forms the basis of our treatment of fevers. But sometimes the need for relaxation and elimination is more pronounced, and then to the basic duad we add veratrine. On the other hand, "behind sthenia, asthenia always lurks," and we see, or "sense," the coming weakness of heart, lung or brain. Then we reinforce the digitalin by adding strychnine, preferably the arsenate. We thus have two triad combinations, aconitine and digitalin in each, with veratrine for the sthenic, strychnine for the asthenic condition.

The doses are made exceedingly small, the effects of these four defervescent alkaloids being so quickly manifested that the small amounts may be repeated every fifteen minutes until we get exactly the degree of effect we desire. After this, the effect may be sustained by less frequent doses, or suffered to subside, as the case demands.

Quite frequently we are compelled to change from one of the triads to the other, and perhaps back again, as the condition vacillates between asthenia and the need of more elimination. We thus have in our hands the most apt, the most flexible, the most speedy, the most powerful, and the safest weapons ever presented to the medical profession for the treatment of fevers.

The choice of the arsenate among the salts of strychnine is forced upon us alike by experience and by the results of modern observations. The germicidal powers of ar-

senic in various forms has been demonstrated in several germ-diseases due to animal parasites. This application unquestionably will be extended. Thus, arsenic possesses a peculiar influence in causing fatty degeneration, and this is apt to be exerted upon the crude, newly formed debris of disease rather than upon healthy tissue. It means speedy convalescence and fewer sequels.

In some cases, there is little fever but unusual manifestations of cerebral disorder. In these, gelseminine has proved more beneficial than either aconitine or veratrine.

In the treatment of vasomotor disorders, the following routine may be suggested: (1) Empty the bowels, and disinfect them. (2) See that the eliminants are in full operation. (3) Regulate the circulation by the use of aconitine, to relax abnormal tension or spasm, and digitalin, to restore tension where paresis is observed; administered together every fifteen to sixty minutes, as needed. (4) Reinforce with veratrine if sthenia prevails or elimination demands increase; with strychnine arsenate, if debility supervenes or the heart shows signs of weakening. (5) Add such other treatment as circumstances may demand.

While this is the treatment for fever, the principle holds good in nonfebrile perturbations of vasomotor equilibrium, as in neuralgias, asthenias, emotional disturbances; and to obviate the effects of exposure to cold, wet or fatigue.

WATCH THE CLINICAL THERMOMETER

A writer in *The Chicago Daily News* calls attention to the lack of cleanliness characteristic of many physicians in handling the clinical thermometer. The danger of the public drinking-cup as a disease spreader is now pretty well understood, and this nuisance has almost been legislated out of existence. So, also, the public towel is doomed. For all that, there still are thousands of physicians who never think of sterilizing their clinical thermometers, although they would be horrified at the thought of undertaking a surgical operation unless their instruments were rendered absolutely aseptic, plenty of sterile dressings were supplied and the surgical field and their own hands carefully prepared by prolonged scrubbing and the aid of suitable germicides.

The doctor's thermometer visits pretty nearly every person in every community. On the same day it may go into the mouth of a child suffering from diphtheria, in that of a man down with typhoid fever, of a woman

in the last stage of cancer, and possibly of some person suffering from chancre of the lip or mucous patches. The opportunities of this ubiquitous diagnostic aid for picking up germs are probably unequalled by any other instrument in the physician's outfit. Yet, unfortunately, it cannot be sterilized by boiling, while, on the other hand, the mere perfunctory rinsing in a little cold water, the solemn rite to which physicians quite commonly submit it, under the mistaken conception that they are keeping it "clean," is absolutely ineffective for the purpose of ridding it of microorganic life.

There should be a regular established routine for keeping the thermometer clean. The simplest plan, and sufficient under most circumstances, is to immerse it for two or three minutes in 70-percent alcohol (compare this journal, 1912, page 939), after which it may be wiped dry (although not necessary) with aseptic gauze—distinctly *not* with the physician's or anybody else's handkerchief.

If the patient is suffering from some severe infectious disease, the thermometer should first be immersed in some strongly germicidal solution, and then well wiped with the aseptic gauze. Various appropriate liquids suggest themselves, but I would suggest 70 percent alcohol as a basis and to this add 1-4-percent of iodine, which is claimed to destroy anthrax bacilli in one minute, besides killing all other pathogenic germs. Or, the alcohol might contain 1 percent, say, of formalin. Also, one might immerse the instrument in strong phenol and then rinse it in alcohol. Such antiseptics might be kept on hand.

The container holding the thermometer should be capable of being sterilized by boiling, and it should be boiled frequently enough to insure its being fairly aseptic inside; in case of doubt, an occasional bath in a germicidal solution as above mentioned will be advisable. In fact, a noncorrosible tube may be kept filled with 70-percent alcohol.

Of course, when the physician has in charge a prolonged illness requiring the repeated use of the thermometer, the family should be directed to procure one for the exclusive use of the patient. Nor should this be kept indefinitely. Thermometers, like other things, seem to "grow old," and after a time they lose in accuracy. If you have such an old one, check it up with a new one occasionally, one that has been carefully tested and is known to a certainty to be correct.

Finally, keep a generous supply of thermometers on hand and always carry two or three with you—several may break in a single day.

Leading Articles

Things That Are Not Fallacies

By J. H. BRISTOW, M. D., Portland, Oregon
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EDITORIAL NOTE.—This is supplementary to Dr. Bristow's article upon "Some Medical Fallacies," which appeared in CLINICAL MEDICINE last month. Be sure to read that—and then read this.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE has done me the honor to present in its columns certain thoughts of mine regarding some of the fallacious things done from time to time by members of our profession. I have been soundly criticized; a thing that I expected and wished for. At all events, my readers will agree with me that it always is beneficial to us to raise questions of this nature and fight them out fairly to the end. There is no other answer for my critics.

I have said that I am not opposed to the efforts of any good and honest workers in the field of medicine; but, in order to show my good will in the matter and to take off some of the grouch displayed last month in "Fallacies," I now will offer some of my experiences in the treatment of the sick, and the conclusions arrived at.

In common with the rest of humanity, physicians have a tendency to swing from one extreme of thought to another. At present we are about to regain a rational footing regarding therapeutics, after a season of nihilism that has been very pronounced and widespread. In another place I have related the incident of the question being put to me by a fellow member of the local society, "Do you ever go to attend a pneumonia patient any more, and do you ever let anybody pay you for doing so?" The answer was: "I do. And I believe that I have seen fresh air, aconite, and digitalis save the lives of the victims. Getting pay for it, that is a different subject."

I have a proposition for those of our craft who profess having no faith in the power of drugs to influence the functions of the body or to modify the symptoms of a disease. Take

that most common departure from the normal, constipation. All will agree to this simple affirmation: A sufficient dose of calomel or of castor oil will move the bowels. Then, I say, their action is identical. As a matter of fact, their action is similar only in that they move the bowels, for the character of the movement and the after-effects are different. That is to say, calomel and castor oil modify the functions of the excretory machine in an altogether different manner. If this be true, then it stands to reason that there are other drugs that will modify the functions of that part of the organism, but none of which, in all likelihood, will produce identical results, one with the other. Likewise, that the intestinal tract is not the only part of the organism that may be affected by drugs. Opium produces constipation. Already we have at hand some very ordinary drugs that produce an entirely opposite effect upon a given part of the organism. By way of parenthesis—reflect for a moment upon the tremendous difference in the manner of action between opium and castor oil.

To my mind, this carries the argument far enough. If these plain facts are admitted (and none can deny them), I, for one, will admit that there are means, could we but lay our hands upon them, to increase or to diminish any of the ordinary processes of life; and not only that, but these given changes of function may be, in detail, of different character. Now we should be in a position to consider the changes wrought, for example, by digitalis, by calcium sulphide or by aconitine.

We are taught that there are a number of acute diseases that will run a given course

regardless of the treatment applied. I have little patience with such teaching. To be sure, there are a number of diseases that will run some sort of a course, according to the circumstances surrounding a given attack—a given patient; but, if there are drugs that will modify the ordinary phenomena of the body-functions, then there must be drugs that will modify these phenomena when they are laboring under the effects of a disease. To be even more assertive, I will affirm that in fatal afflictions, such as cancer or Bright's disease, the effects of the disease may be modified by treatment—by the use of drugs—so as materially to prolong life.

The argument presented in the foregoing really is elementary (doubtless I should apologize for presenting it), but it seems to me that it is impossible to deny the simple truths set forth.

So far as nature, with her mystery of life, is concerned, there is nothing abnormal. Birth and growth, disease, death and disintegration are but natural processes in the inscrutable manipulation of those elements and their changes which belong only to her. Disease to her is the manifestation of the rise and fall of a nation, perhaps of the pneumococcus. The host is of no more consequence than is the soil upon which our nation subsists. If this be true, then why can we not, within bounds, modify the phenomena called disease, for in doing so we only are setting in motion certain forces or processes of nature, the power for so doing having been kindly placed in our hands. In like manner, we plant seed in the earth, that we may set in motion certain favors, or forces, of nature, which in due time will permit us to reap.

It was not intended that we should die of disease. In the words of that good old hackney: "Disease is the result of our transgression against the laws of health." It must be true that there are those things placed to hand which, by proper use, will eradicate disease and permit us to approach the disintegration of our bodies in the way nature intended—through old age. The perfection of serums and vaccines, and those medicinal remedies known to us or that shall be revealed, rightly used to supplement the hygiene of the nation, the community and the individual, will finally, and through the profession of medicine, so prolong the span of life and mitigate the sorrow of suffering that the blessing conferred will be second only to that given by Him who walked upon the waters and bade the winds be still.

Acute colitis is a disease of more than passing interest, because of its pathology, the mistakes that are made concerning it, and the ease with which it may be controlled by proper treatment.

The pathology of acute colitis is interesting. When the disease is fully developed, there is relaxation of the anal muscles to such an extent that inspection of a considerable portion of the rectal mucosa may be made during attempts at bowel movement. Were it possible to carry the inspection farther, it would be seen that disease of the mucosa extends upward along the bowel as far as the transverse colon, more or less; depending upon the severity of the attack and the length of time it has existed. Carried still farther up, inspection would reveal, beginning just above the diseased portion and extending several inches, a section of bowel in a state of tonic contraction, whereby there is formed above it a lake of infectious feces, which, by its constant dribbling through the narrowed part, renews the infection existing below.

There is poor appetite, probably no vomiting after the first day, pale moist skin, small pupils, quick pulse, moderate temperature, obstinate and progressive prostration, and a most intractable *painful and bloody diarrhea*.

The prognosis is almost altogether a matter of treatment. It is favorable with good treatment, but with indifferent treatment death is liable to occur.

The mistake most often made is, to diagnose "summer-complaint" (there is no such disease) or gastroenteritis, and as a consequence applying treatment for a condition that does not exist; while the real pathology going forward in the bowel proceeds with its work practically unhindered by the treatment.

If the physician will remove the diaper of a child presenting the symptoms enumerated and inspect the anus during a bowel movement, he will arrive at an illuminating amount of information that at least will redound to the future comfort and safety of that particular patient.

You can not, successfully, make topical applications to the sigmoid flexure and rectum by way of the mouth. Therefore:

Give, in broken doses, a good course of calomel and follow it with a big dose of castor oil. At the time when the physic is active give a high and huge salt-water enema through a rectal tube or a large-sized catheter in order that it may penetrate the constricted portion of the bowel and wash away the debris collected above. Then, by means of a hard-rubber gun and a rectal tube, introduce, high, an

ounce of olive oil containing one of the bland preparations of bismuth. Be sure that your bismuth is pure. Tenesmus will be relieved like magic. Repeat the local treatment as often as indicated. The condition of the pupil and skin call aloud for atropine. Give calomel, 1-10 grain, every night after the first dose; the sulphocarbolates three or four times daily. I prescribe the combined sulphocarbolates in the form of powder, with milk-sugar, for infants of any age.

The diet should be regulated with greatest care, for it is one of the essentials of success. Remember that milk has no place in the scheme of treatment, and that the practice of giving broths, especially chicken broth, is a bad one. Recovery is nearly always slow, and the fight must be kept up diligently until recovery is complete.

Make a diagnosis. We are told, time and time again, in the pages of this journal, to diagnose our patients' troubles before we undertake to treat them. Don't treat colitis as you would enteritis or gastroenteritis.

That was a long time for me to stick to a prosaic medical subject, so I must digress once more.

This article is not written to boost anybody's preparations, neither is it an advertisement for a drug house, nor either have I any interest in any drug house.

In discussing the treatment of colitis, I mentioned calomel. I should like to have anyone who is skeptical regarding the efficiency of pure drugs to go into the open market and buy just any little white tablet containing half a grain of calomel, and take it himself, half an hour before breakfast. Then, in a week, when you are feeling "just the same," get five 1-10-grain tablets of calomel with aromatics and take the half grain they contain just as you did the previous dose of this remedy. It will not hurt you any, in fact it will do you good—and, incidentally, it will widen your horizon concerning the activity of drugs. In any case, it will be no worse than the other therapeutic experiments you perpetrate upon your luckless patients day after day.

And now I want to mention three therapeutic crimes; to wit:

1. To give aconite without first knowing of its undoubted potency.
2. To give a preparation of digitalis about which there is the slightest shadow of doubt.
3. To wait, during an attack of pneu-

monia, for manifestations of heart weakness before beginning to give digitalis.

Many difficult problems are brought before us for our solution. One of them is the man who is or, what is worse, thinks he is impotent. Another, the married woman who has a good, clean husband and who herself is a person to command respect, who has the instinct of motherhood strong within her, who apparently is in perfect health, but, yet, who is sterile. Reflect for a moment upon the vast amount of writings and theories promulgated anent this subject. With no desire or intention to enter upon a scientific discussion of this matter, I merely wish to relate three cases that lately have come under my observation.

The first patient was a woman 28 years of age, married seven years. A careful investigation revealed nothing that would seem to account for her sterility. Her husband was healthy and gave a good history. He was not examined. The second woman, married eleven years, was 32 years old. Her case was like the preceding one in all respects. The third one, aged twenty-one years, had been married two years.

In considering the many theories regarding normal secretions, ovulation, and so on, without number, the thought occurred to me that perhaps the giving of an aphrodisiac pill for a period of time might increase the general functional activity of the organism, especially the pelvic organs, and thereby bring about the necessary conditions to cause pregnancy. Accordingly I prescribed remedies of that nature.

The first woman became pregnant during the third month after beginning the medication. I delivered her, by cesarean section, of a 10-pound boy. (No, not on account of those pills!) The second woman, under the same treatment, became pregnant in five months; but she was lost sight of. Pregnancy began, in the third woman, in about three months and terminated normally.

Not even three swallows make a summer, and so I do not know how much this may be worth. I wish we might hear more of this sort of thing, however, in place of the promiscuous tamponing that leads both ourselves and our patients into the delusion that something is being done. You know what I mean.

When the newborn child develops a mild ophthalmia—or, indeed, a child of any age, or any other person—do not take it for granted that just because the ophthalmia is mild it is

not specific. In my service at the hospital we have repeatedly demonstrated the gonococcus in mild purulent discharges from the eye. As I write these lines, I have stopped long enough to demonstrate the germs of gonorrhea in a very mild discharge from the eyes of an infant of two months of age. This in private practice. One of the mild preparations of silver will give good results.

The point I wish to make, however, is, that another person can contract a most violent condition from this seemingly simple one. I'm sure that it can only be providential that more calamities of this sort do not occur. One should never fail to submit every discharge from the eye to a careful scrutiny with the microscope.

Our loss of faith in the ability of our remedies to modify the effects of disease has been a serious detriment to progress; still, perhaps, on the other hand, it may work for our good by establishing a rational conservatism. I believe that our slim confidence in medicinal remedies was caused by the extreme empiricism of our ancestors, followed by our pronouncement that we must know exactly what we are doing before we do anything. There is a loss of faith, though, that is working untold harm, not only to ourselves, but more especially to the public.

I here refer to the diminished confidence of the public in the medical profession. An explanation of this matter would be much involved; indeed, it is difficult to understand, for our work was never so good, and never has the profession been honored by so many brilliant minds as at the present. If it be true that we do not enjoy the full confidence of the public, then a return or an increase of regard for us depends entirely upon ourselves. I wish to make one suggestion.

Let us always explain to our patient or to his friends the diseases and their remedies in plain English terms that the layman can easily understand. They have a right to know all they are able to comprehend, and we should give it them in language that is intelligible, in place of making ourselves obscure and at times a laughing-stock by the use of long and senseless words.

There recently appeared a sentence in *CLINICAL MEDICINE* which I am sure the average layman would not comprehend. It said: "Acute epidemic cerebrospinal meningitis may be differentiated from acute anterior poliomyelitis by finding the diplococcus intracellularis meningitidis of Weichselbaum within the polymorphonuclear leukocytes in

the sediment of the cerebrospinal fluid by lumbar puncture"! No, he wouldn't. He would think of a tin-shop or of the king of the Cannibal Islands asking a blessing. See whether you can say it yourself and not look on the paper. You see very well, Mr. Editor, that I myself could not get it right "on the typewriter."

Lately I called a good friend of mine in consultation, in order that he might assist me in clearing up an obscure abdominal condition. His statement to the patient ran something like this: "You may have *tabes mesenterica*, or a pathological condition with malignant tendencies, or merely a cystic ovary with adhesions and its attendant tendency to hydroperitoneum." He meant well enough, to be sure, but the patient did not seem exactly to catch the drift of his remarks, with the result that after he was gone I had to put in all the time I had left explaining what the good doctor meant, in place of laying before her the propriety of exploratory section. She has not been back, and I'll be durned if I should be, either. Not if I had to have "all them things," I shouldn't.

It is not difficult, if one will but cultivate the faculty, to state facts concerning the disease and its remedies in terms plain enough to satisfy the patient, set up a feeling of confidence all around, and remove a moiety of the medieval superstition which still besets the mind of the public. The average layman still clings to the idea that there are mysteries going on in his insides that are removed, often, by some equally mysterious drug that somebody sent away for or that some doctor knew about when no one else did. A practical effort in bringing the public down to date in these matters will help in finally restoring us to that place in the world's confidence where of right we belong.

Let us see for a moment whether we have not changed greatly in a few years. There used to be an institution known as the family doctor. Such a man was my father as he dwells in the memories of my childhood. But our day is one of such extreme specialization that half of the time when a patient comes to visit us it is merely to ascertain just what specialty his case belongs to.

What used to be "our families" now have this one who treats their skins, the other who fixes their eyes, one who attends to their rectal troubles, and another who looks into their stomachs. The family doctor, with all the confidence that he inspired, is becoming but a memory. For my own confusion I

must admit that our specialties are represented by men of rare talents and skill, and they practice medical ethics to the very letter. Indeed their behavior in the latter regard sets an example that all of us would do well to follow.

As for me, I am somewhat old-fashioned. Give me back the days of my father, when the family doctor was the man beloved. He

might commit sins of omission, but never of commission. He was the soul of honor; his bond was his spoken word. He was the councilor who never led astray, who never earned a dishonest dollar, who never smirched the good name of a woman, who held in the paths of virtue the feet of those gentle ones who walked near him. He died revered by all who knew him, and he dwells sweetly in their recollection until all shall have joined him.

Sexual Neurasthenia

Its Causes, Symptoms, and Treatment

By WILLIAM J. ROBINSON, M. D., New York City

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EDITORIAL NOTE.—*Dr. Robinson's papers on the sex problem are distinctly "different." They aim to go right to the heart of the matter, without equivocation or pretense. Yet they are clean, concise, practical—and intensely interesting. Whether you are inclined to agree with Dr. Robinson or not, you should read what he has to say.*

SEXUAL neurasthenia is one of the most prevalent of diseases and the number of sexual neurasthenics is constantly increasing. Its manifestations are truly protean in character and, as will be seen, there is not a single organ in the body that, in the sexual neurasthenic, may not show pronounced symptoms of disease. And not only the patient's body, but his psyche, his spirit, is deeply affected.

Definitions often are unsatisfactory things, and it is not easy to give a brief yet all-embracing definition of sexual neurasthenia. I prefer to define it very simply: a condition of general bodily and nervous exhaustion resting on a sexual basis. After the symptomatology has been discussed, the picture of the disease will stand out clearly, and the reader will not be harassed by doubt as to what is meant by the term sexual neurasthenia. To us, the sexual neurasthenic is so familiar that often we can recognize him at a distance. We know him by the way he walks in from the waiting room to the office, by his greeting, by the way he begins to give his history.

The Etiology of Sexual Neurasthenia

The causes of sexual neurasthenia may briefly be stated to be as follows: First,

abuse and disease of the sexual organs; second, our civilization; third, heredity.

Under the first rubric, we include in the order of their importance: masturbation, pollutions and spermatorrhea, coitus interruptus, continence, gonorrhea with its various complications, especially posterior urethritis and prostatitis, and last—and least—sexual excess.

If I do not include impotence as a cause of sexual neurasthenia, it is because impotence and neurasthenia are both, generally, the concomitant results of antecedent causes, and also because impotence often is the result of neurasthenia.

Second. By the term civilization I understand both, those agencies which exhaust and drain the nervous system and those which prematurely awaken and constantly stimulate and irritate the sexual instinct. The early school-age, the excessive studies, the frequently recurring examinations (these are particularly injurious), the long hours at factory or shop, the struggle for bread, the still worse nerve-wrecking struggle for a career, the constant striving after more and ever more money or after fame, our poetry and novels, our theaters and vaudeville shows, the paint, powder and suggestive dressing of our respectable women, the

solicitations of our nonrespectable street-women, bad school companions and vicious acquaintances of both sexes—all these are factors which prepare a sexually neurasthenic soil.

As to heredity, I do not ascribe to it the same importance that other physicians do. I have expressed my opinion many times before, that the importance of heredity as a factor in disease has been greatly exaggerated, and that, in my opinion, heredity plays but a very subordinate part in sexual disorders. It may be admitted, however, that children of neurotic and otherwise tainted parents are more liable to fall victims to various sexual irregularities that may lead to sexual neurasthenia, and that, on the other hand, injuries which would have but little effect upon descendants of healthy stock may bring irreparable disaster to nature's unstable step-children.

Is any one of the causes mentioned in rubric one in itself sufficient to induce sexual neurasthenia? Is masturbation alone, for instance, sufficient to do it? If indulged in to great excess, it may of course, without the aid of any other factors, bring about sexual neurasthenia. But let us leave out the extreme excesses, the so-called furious masturbation.

Let us take the various moderate degrees. Why does A, who practiced masturbation pretty steadily, three or four times a week for several years, escape practically without any damage, finding upon attempting intercourse his powers unimpaired and his nervous system unaffected, while B, who practiced masturbation only once or twice a week for about two years, finds himself a confirmed sexual neurasthenic? It is, because A was born of healthy, untainted parents and lives an easy, open-air, practically care-free life; while B has inherited a nervous constitution, has always led an indoor life and has studied hard from childhood on, using up his last bit of reserve force in competitive examinations. Why does C make a joke of his chronic protracted gonorrhea, his only regret being that he cannot indulge sexually as often as he would like to, while D is thrown into the deepest distress, and the little, hardly visible morning-drop makes a gloomy hypochondriac of him? The same reason.

And so it is with all causes we have enumerated above. They may, in themselves, in exceptional cases, cause sexual neurasthenia, but they are much more likely to do so if they are operative in a man who has inherited a nervous constitution and who

lives the high-pressure, unhygienic life of our modern civilization.

The Symptomatology of Sexual Neurasthenia

As indicated at the beginning of the chapter, the symptoms of sexual neurasthenia are exceedingly numerous and varied. We could start at the top of the head and go down to the soles of the feet, and we should find that every organ in between may be attacked and may show symptoms varying from being merely annoying to agonizing. But we will begin with the sexual and urinary symptoms, as they are more immediately and more frequently concerned.

Krafft-Ebing divides sexual neurasthenia into three stages. In the first stage, the genitourinary organs are locally affected, and we have here the various functional disturbances of coition and urination and pains in and around the genital organs. In the second stage, the neurosis has extended to the lumbar cord and the patient complains of various symptoms pointing to spinal irritation. In the third stage, we have a general neurasthenia.

We will not adhere to his division, because, although schematically very convenient, this sequence is but seldom observed in practice. The symptoms of these various stages generally are interwoven, while those of the so-called second or third stage may make their appearance before those of the first. We, therefore, shall follow a more practical method.

Sexual Symptoms

Disturbances of the sexual system form, of course, a prominent feature of sexual neurasthenia. The patient tells us he is impotent and that his organs have shrunk away. When we tell him to undress, we find in reality the penis very small, retracted, sometimes so completely "drawn in" as to be hardly visible, cold, livid, and very hard. This hardness is rather characteristic; the hardness is sometimes that of cartilage. The scrotum also is well contracted and retracted, so that sometimes it is difficult to feel the testicles. The testicles are either normal in size or, in extreme cases, especially where the neurasthenia is the result of excessive masturbation, considerably reduced. They are, generally, very sensitive to the touch, sometimes to such a degree that the gentle grasping of them between the fingers will cause the patient to turn deathly pale, his face will be covered with cold perspiration and he is ready to faint, sometimes even actually fainting.

The small size of the penis is partly real and partly psychic. That the small size of the penis, which we notice upon examining the patient, is partly due to psychic causes, is seen from the fact that it is generally only during the first examination that its shriveled condition is so apparent. It is the "shame" and nervousness before the physician. At subsequent examinations the larger size of the organ is quite noticeable. And this same thing occurs at any attempt at intercourse, especially with a strange woman. To the patient's extreme mortification, at the critical moment the penis, instead of getting erected, gets shrunken and shriveled and practically disappears.

In other cases, on the other hand, we find the external genitals greatly relaxed. The penis is rather large, but soft and flabby, while the scrotum and testicles hang low down; and there is generally a slight varicocele on the left side.

Pollutions are frequent, and generally atonic; in the further progress of the disease they become diurnal, and may be accompanied by spermatorrhea. Impotence is either absolute, the patient being unable to get any erection, or he has feeble, imperfect erections, which subside quickly. The ejaculation in the vast majority of cases is premature, generally taking place even *ante intromissionem*; in a certain percentage, however, it is retarded, the patient being able to effect intromission, but the erection subsiding before ejaculation has taken place.

A peculiar symptom the patients complain of is a burning, scalding sensation during ejaculation. The pleasurable, voluptuous sensation which the normal man experiences during the passage of the semen is in them completely absent, and the burning, scalding feeling, combined with subsequent depression, renders the act of coitus a very unpleasant function. And, yet, they have an irritated, unpleasant feeling, what I should call a pseudo libido, which forces them to indulge again and again. Others, however, in whom the libido is very weak or completely extinguished may abstain for years from any sexual relations.

Masturbation, severe and uncontrollable, many times is complained of. It may seem strange that masturbation, which we gave as one of the causes of neurasthenia, should here be considered as one of the symptoms or results of it. Still, there is nothing incongruous in this. In many diseases, and in sexual disorders *par excellence*, a vicious circle generally is established, so that the

original cause becomes but one link in the chain of symptoms.

Masturbation is one of the principal causes of sexual neurasthenia; but, after masturbation has succeeded in bringing about the neurasthenia, the patient's will is weakened and he may become a helpless slave to the habit. While at the beginning the patient could control himself more or less and the masturbatory act afforded him pleasure and satisfaction, he now indulges in it because he cannot help himself, because he seems to be impelled by a *force majeure* and in spite of the fact that the performance of it not only not gives him no pleasurable sensation, but, on the contrary, causes a burning, unpleasant feeling in the urethra and leaves him depressed and disgusted.

On some neurasthenics the effect of intercourse is very profound. It leaves them for a day, for several days, sometimes for several weeks even, completely exhausted, both mentally and physically. Their brain is fagged out, they can not concentrate upon anything, their legs are weak, they fatigue quickly on walking, and suffer from severe cardiac palpitations.

Besides the functional disturbances in the sexual act, numerous symptoms manifest themselves in the genital organs, which are very annoying to the patient and very trying to the physician. The skin of the penis and of the scrotum is hypersensitive and the patient often complains of various sticking or neuralgic pains. There is generally extreme sensitiveness to cold. Pains in the testicles are frequent, as well as in the prostate gland. Sometimes the pains are only shooting and last but a second, at other times they are very persistent, and may extend to the prostate gland, the kidneys, legs, and even feet. In some cases there is very severe itching about the genitals, the most careful examination failing to elicit any basis for this pruritus. Sometimes, instead of affecting the genitals, the itching is confined to the arms. A very disagreeable and resistant symptom is hyperidrosis and bromidrosis of and about the scrotum. The odor of the perspiration in some cases is extremely offensive.

The "hanging-drop" symptom is to some patients the most maddening of all. Patients who suffer neither from urethrorrhea nor from spermatorrhea (in these disorders the drop is present) will imagine that their meatus is wet and that there is a drop in there. Dozens of times they will examine the organ, only to find it perfectly dry; but, still, they

will continue to be tortured by this apparently slight but to them very disagreeable symptom.

That the urethra, particularly near the meatus and in the prostatic portion, feels extremely sensitive, we have already seen in the chapters upon masturbation, pollutions, and others. We have also seen that, on the other hand, in the later stages of the disease the urethra may become almost completely anesthetic.

Urinary Symptoms

The act of urination is very much disturbed. The patients urinate very frequently, particularly in the day-time. They may have to get up nights, but that only in extreme cases. As a rule they sleep through the night very well; and this is one of the characteristic symptoms regarding the relative frequency of micturition in neurasthenics which distinguishes it from frequency of micturition in other disorders, such as hypertrophy of the prostate gland. The frequency of urination is sometimes very great. Some patients have to urinate every hour, some every ten or twenty minutes. There is a little dribbling of the urine after each act and the patient will not feel fully relieved. They always feel as if there were some urine in the bladder which they are unable to void.

While in many cases the urination is painless, in others there is associated with the frequency considerable dysuria and even strangury. Nervous retention of urine does occur, but is rare. The difficulty or inability to start the act of urination is another symptom worth while referring to. Some patients may have their bladder full of urine and still be unable to micturate in the presence of the physician. They must retire to a separate room or behind a screen, and only then are they able to do it. Some can start the act of urination only at the sound of running water.

The shiver to which we referred in the chapter on pollutions is here very prominent. It is either localized in a small portion, usually the center of the spine, or it takes place throughout the entire spine. Occasionally the entire body will participate in the shiver, so that the knees suddenly flex and the head shakes. Since I became familiar with this symptom, I have made it a point to inquire of each sexual neurasthenic as to its presence, and in the largest percentage of cases the answer would be in the affirmative. Patients who present this symptom do not have

it constantly. It appears with some urinations; it is absent with others.

In trying to solve this point (why patients experienced it at some urinations and not at others), I made a microscopic examination of a large number of specimens of urine, and I have discovered the following peculiar fact: Whenever these patients experienced this shiver, the urine contained semen and spermatozoa; whenever the shiver was not experienced, the urine usually was free from spermatozoa. Hence, it is my opinion that the shiver occurs only when there is an ejaculation, be it even ever so slight. As mentioned above, I pay great attention to this symptom, and its disappearance is a sign of positive improvement in a patient's condition. Its reappearance is an indication that the patient is "going back."

The urine itself undergoes considerable changes. In the early stages the patient as a rule passes very large amounts of urine of a pale color and a very low specific gravity. It may be as low as 1002 and look exactly like water. Later on, however, the urine diminishes in amount and may even become less than normal, and is of a dark color and high specific gravity. It may arouse in the patient and in the doctor fears of Bright's disease; but a chemical and microscopical examination will settle the diagnosis. Phosphaturia is a very common symptom, the urine often being loaded with phosphates. Oxaluria also often is present, although not so frequently as is phosphaturia. The excessive amount of calcium-oxalate crystals and also of phosphates is partly responsible for the scalding sensation which the patient experiences during urination. Due to the constipation and the intestinal fermentation, indican usually is present in large amounts; sometimes to such a degree that, upon making the indican test, the urine turns actually black.

Of course the urine also presents the various appearances of underlying pathologic conditions: postgonorrhoeal shreds, the masturbator's shreds, the "cloud" of spermatorrhea, and the rest.

Pains and Aches

Pains and aches in the spine and in the back are among the most frequent—one might say the most frequent—symptoms of the neurasthenic. Usually it is not a pain, but just a constant dull ache in the small of the back or in the middle of the spine, which is so exasperating that many patients say they would gladly exchange it for an acute pain.

The patient feels like rubbing his back against a door-post or bedstead or any other hard object, and feels greatly relieved after a rough kneading or slapping or massaging of the back or the application of a counterirritant to the aching region. Sometimes the pain is limited to one side, in the kidney region, and may simulate renal colic so closely as to bring the patient near the operation-table.

Circulatory Symptoms

Among the symptoms on the part of the circulatory system, the most frequent is palpitation of the heart. The least excitement or muscular effort is prone to cause it. In the night-time, if the patient wakes with a start—which he often does—the heart will beat tumultuously. The pulse is frequent, often over 100 per minute, small, occasionally intermittent. There is a feeling of discomfort in the cardiac region; it is not a pain, but the patient feels like rubbing, pressing or supporting the precordium. Sometimes, though rarely, there is a real pain simulating angina pectoris. And all these symptoms, of course, without any heart lesion; although, again, of course, a sexual neurasthenic may also have heart disease—but that is another matter.

On account of the poor and irregular circulation, the patient's feet are often cold and clammy, so that he must sleep with his stockings on, even in fairly warm weather. His hands may also be cold and clammy and perspire readily. The blushing at the least provocation and the frequent congestion of the head also find their explanation in the disturbed circulation and innervation.

The respiratory tract is not affected. Some authors have described a dyspnea or asthma peculiar to sexual neurasthenics, but I have not come across any such instances in my practice. If the heart is subject to severe palpitation, then the patient is naturally apt to become short of breath, but this dyspnea is then merely a part of the cardiac symptoms.

Digestive Symptoms

The digestive disorders occupy a prominent place. The appetite may vary from bulimia, which is quite common, to complete anorexia. And it is worth noting that, in spite of his excessive appetite, the bulimic patient may emaciate almost as much as the patient without any appetite. For the assimilation is poor, and the patient's metabolism is very rapid. Symptoms of dyspepsia are seldom absent: coated tongue, heavy breath, heartburn (which may be extreme, the patient

declaring that he feels as if he had a burning coal in his stomach), hyperacidity followed, afterwards, by hypoacidity, constipation, rarely diarrhea, belching of gas, borborygmi; occasionally there is some difficulty in swallowing.

The digestive disorders are important, for it is they that generally first send the patient to the physician. A patient has no hesitancy in consulting a physician about a digestive disorder, while he will wait for years—until his condition is unmistakable and intolerable—before he will seek advice for a sexual trouble.

The Special Senses

To the symptoms of the special senses, we will refer but very briefly. The eyes, as we mentioned already, are easily fatigued, and the patients frequently suffer from eyestrain. *Muscae volitantes*, floating specks before the eyes, is not an infrequent symptom extremely annoying to the patient. Itself the result of the neurasthenia, it often helps to aggravate it. The patients are extremely sensitive to noise. The tooting of automobile-horns, the noise of vehicles, loud music, the chimes of church-bells, and the like, are a veritable torture to them. The sense of smell may be hyperacute; or, sometimes, there is a perversion of that sense—the patient all at once will experience the odor of iodoform, musk, or other odorous substance. The sense of taste is but very seldom affected, although it may be.

Physical and Mental Work

In the extreme stages of neurasthenia, the patient can do no work, either mental or physical. He cannot force himself to do any original mental work, it being an utter impossibility for him; and when he does force himself to do some routine mental or physical work, he gives out very quickly and has to rest or lie down.

In the earlier stages, he may be able to do very good and very intense work, but only by spurts. He cannot do anything steadily, calmly, placidly. He is not a plodder and he cannot work systematically. If he writes a book, he is very likely to write the last chapter first, then a chapter from the middle, then the preface, then he may throw away the whole thing and start on upon some altogether different kind of work. But in the end, when he fits the pieces together and fills up the gaps, he probably may find that he has accomplished more than the plodding systematic worker would have

done. He will whip himself up, work without interruption sixteen or eighteen hours a day for several days in succession, and then his mind will become a blank and he will be unable to do any mental work whatever for several weeks.

I am speaking here of mental workers, because they form a large percentage of sexual neurasthenics and because, further, my practice is largely among the intelligent classes—writers, artists, and men and women of that order. It should be borne in mind that some of the world's greatest writers and poets were sexual neurasthenics; only, however, neurasthenics in the earlier stages. Extreme neurasthenics do not write, and what they do write is not worth reading.

Some reader might stop here and ask, "Isn't it possible that the long, rapid, hurried work exhausts the patient and is in itself responsible for many of the neurasthenic symptoms?" And I will answer, "It is." Cause and effect, I will emphasize once more, are closely interwoven in human pathology, and whatever the cause that urges the patient to consuming, long-houred labor, there can be no question that this labor itself will still further aggravate his original condition.

However, I do not believe that hard mental labor, within rational limits, will by itself cause sexual neurasthenia. There must be some additional favoring predisposing causes. I said, within rational limits. Of course, if a man works sixteen to eighteen hours a day steadily for many weeks and gets no fresh air, and on account of that he eats poorly, and then, moreover, on account of the cerebral congestion induced by his hard mental work he sleeps poorly, he may break down, develop general neurasthenia, and this, in its turn, will bring about sexual neurasthenia. But this is work beyond rational limits.

The Mood

The mood of the sexual neurasthenic is extremely variable. The least pleasant occurrence or expectation lifts him up to the skies, the least unpleasantness throws him into the abyss of despond. But most of the time he is afraid of something. If you ask him to analyze his fears, to tell you himself what exactly he is afraid of, he is unable to do so; but, still, he is afraid that something bad is going to happen to him. He is going to lose either his business or his position; or his rival is going to get ahead of him; or some misfortune is going to happen to a member of his family; or the house is going to be burglar-

ized; or he is going to be arrested; and so without end. Sometimes the fear is vague and has no specific object—the patient is just depressed and afraid, and for this reason he avoids people in general.

If the neurasthenic is not yet far gone, then a misfortune, an attack, a shock or some great emergency may stir him to action, may awaken the rest of his dormant powers, and he may, for a time, surprise his friends by his unwonted strenuous activity. But, unless at the same time he is subjecting himself to proper treatment, he generally relapses into a condition of exhaustion that is worse than the condition he was in previously.

One of the forms the fear takes is the fear of disease, that is, the fear of getting sick. It is perhaps the fear of typhoid fever, of heart disease, of Bright's disease, or whatever it may be, but most generally it is the fear of locomotor ataxia or of general paresis. This is particularly the case with our semicultured who have read a lot of quack-literature or have heard from their friends with little knowledge that those diseases were the result of youthful indiscretions. How many times have we not heard the question, "Doctor, have I locomotor ataxia?" addressed to us by people with whom there was nothing the matter organically and who did not present a single ataxic symptom. They feel like newborn or as if a heavy load had been lifted from their brain when they are assured and when it is proved to them that their fear is utterly groundless.

Frequently the neurasthenic has hypochondriac ideas; still, he is not a true hypochondriac. A true hypochondriac complains of ills and diseases for which there is no foundation, of which he has not a trace. The neurasthenic generally has grounds for his complaints, only he exaggerates his troubles; he magnifies a mild symptom into a terrible one; a slight disorder becomes a very painful one to him. But, then, how can we know? Perhaps his sensitiveness is so increased that what seems to us insignificant does cause him severe pain. For we must bear in mind that the neurasthenic is generally hyperesthetic and his power of resistance is greatly lessened.

Phobias

The extreme cases of sexual neurasthenia may develop various phobias—fear of crossing the street, fear of being in a crowd, of being in a theater, of looking down from a great height, for example. I have seen several cases in which the last-named symptom was very pronounced.

One of my patients was a well-known chemist who did excellent work and who stood very high in the profession. Nobody ever suspected or ever will suspect that there was anything the matter with him; but, for all that, he was a sexual neurasthenic and was possessed of a horrible fear of being in a high place. He was a member of the Drug and Chemical Club, which has its clubhouse in the top story of a skyscraper in William street. And this gentleman would suffer agonies whenever he was invited by his partners or friends to sit down to dine near a window. His legs would shake and the time of the meal would seem to him interminable. When by himself, he would select a table as far

away from a window as possible. Finally he gave up going to the clubroom at all. He is perfectly cured now, however, and not only is he not afraid to stand near a high window, but last summer he climbed the Alps and crossed many glaciers—and laughed at his former fears.

The phobias are on the border-line of psychoses; they form stepping-stones to them. And sexual neurasthenics do sometimes develop genuine psychoses. But here, as a rule, there is something else the matter—there generally is a hereditary taint. And after they develop a genuine psychosis they no longer belong to us. They belong to the domain of the psychiatrist.

Commercialism in Medicine

As Compared With Sound Business Methods

By R. A. WALKER, M. D., West Monterey, Pennsylvania

EDITORIAL NOTE.—Those who read the series of articles upon the work of the Redbank Physicians Protective Association, which appeared in these pages some months ago, should read this supplementary paper by one of its members. This association is doing great work and its efforts should be emulated in every community.

IN the course of human events, every now and again it becomes necessary for someone to defend honest business methods in the practice of medicine against the attacks of the numerous unjust accusations and unworthy insinuations made by charlatans and ignorant pretenders, who, by unfair means and false representations, attempt to poison the public mind against those who have been their benefactors in the past, and would be again but for their dishonest practices.

But, not only by this class are the methods adopted by the Redbank Physicians Protective Association condemned, but by some members of the medical profession who should be standing shoulder to shoulder with us in our warfare against the common enemy, those who would despoil us of our honestly earned stipend.

On this occasion, the task of dealing with this phase of the subject has been assigned to me, and I shall devote my time to pointing out to those members of the medical profession who take issue with us that they either do not understand the object and teachings of the R. P. P. A., or they deliberately are trying to belittle our efforts in the eyes of the public, and pose, in the lay mind, as the

"holier than thou" class, who hold up their hands in horror at anything they may call commercialism, while, nevertheless, they are just as anxious to get all the fees as we (and never shed a tear over a case stolen from you and me, when a nice fee is in prospect).

The Purpose of the Organization

How reads the Foreword of the Redbank Physicians Protective Association? "An association the purpose of which is, the upholding of the high standing of the medical profession, its rights and privileges, its duties and its obligations, and the establishment of a higher degree of ethical harmony and justice." Could any bishop or cardinal preach a purer gospel than that?

The man, or the committee of men, who formulated that compilation of sentences not only had the love and best interest of the medical profession at heart but had also an abundance of the love of God and their fellow man besides. The article in the Constitution entitled "The declaration of rights," at which our enemies "mass their batteries," is Section 6, which reads:

"It shall be the rightful duty of every member of this Association to be lenient with

the honest and deserving poor. But he shall also make it his rightful duty to be on the alert for, and defend himself against, the deadbeat, the dishonest rogue, the shyster, and the malingerer."

Do you find anything in that declaration that would cause a choking sensation on the part of any physician who attempted to swallow it whole? While we do not for one moment wish it understood that we advocate the doctrine of turning our profession into a sordid, ignoble, and remorseless money-making scheme, yet, "the laborer is worthy of his hire," and we, as laborers, come under that injunction.

It looks very fine on paper, and it sounds like heavenly music to hear those disciples of Aesculapius who were born with the proverbial "silver spoon in their mouths" prate about "clinging to the traditions of the fathers and cherishing the high ideals of doing good with no hope of remuneration, except that peace of conscience which comes from "deeds of mercy well bestowed." But those individuals know nothing about having the butcher, the baker, the gas-man, and the landlord at their heels hounding them for their monthly bills.

If I understand the object of this Association, and the aims of those learned gentlemen who in their wisdom inaugurated this movement, in which I from its early infancy have been honored with a membership and in my humble way have tried to foster and help it grow, it is this: That there is only one thing that is, and must forever remain, first in our minds, and that thing is the welfare of the medical profession of the country, with all its aims and objects; the one inseparable and indivisible desire to promote the art of healing, fostering the growth and diffusion of medical knowledge, safeguarding the material interests of its members, and the promotion of friendly intercourse among the members of this organization and the profession in general.

A Square Deal Asked

This is the simple gospel preached by the Redbank Physicians Protective Association, a social order aflame with desire for justice and throbbing with human pity. Yet, some cry: "Commercialism, commercialism. You are belittling the profession by applying such unkind epithets to your patrons as deadbeat, rogue, and so on, to men who beat you out of your bills; and you will lose the influence of your patrons by trying to use commercial means to collect your bills."

My dear fellow physician, verily, your eye is filled with the proverbial beam to such an extent that you think you see a mote in our eye, when we, by the "square deal" method of applying business methods to the practice of medicine, whereby we receive the fruit of our labor, to maintain our families, our self-respect, and our professional dignity, while you, unfortunately, do not seem to realize that the whole business fabric of the practice of medicine has been, and is, undergoing a change, in common with all other business affairs.

The gospel says, "They that preach the gospel shall live by the gospel." Does this apply to doctors as well as to other laborers? I think so. Does any other class of laboring people, when they ascertain that the firm he is working for is bankrupt or unable to meet its obligations, still keep on working week after week, and month after month, quietly, uncomplainingly? Nay, verily, "he flies the coop" at once, raises a howl, and tries by all legitimate means to collect his money. But how with the physician? Oh, that is different. If we apply the same business methods, we hear the cry of "commercialism" raised.

Now, we hear so much of this "rot" commercialism—what is it, anyhow? Let me enumerate some of the things comprising it.

Advertising, either publicly or privately, your wares or talents, securing trade by fair or unfair means, at the expense of your competitors in business; cutting prices; selling inferior goods on the recommendation that they are A No. 1; misrepresentation; false pretense; "drag-me-in methods;" hanging out wares in front of your place of business to catch the eye of the passer-by; placing long articles in the public press, extolling your mighty power to heal the sick; of your great mental efforts and wonderful expense for midnight oil while delving into the misty depths of the unexplored, seeking wisdom which, after making the sublime discovery, is now offered by them to the dear public at so much per; exaggeration, subtlety, boosting by fool friends, et cetera.

But we, as physicians, are conjured to stick to the traditions of the ancient fathers and content ourselves with a little six-by-ten sign containing the mere mention of our name thereon, with the M. D. following it. No newspaper ad for us! no exposure of our talents and ability! No, that is commercialism. Then, why not object to the medical-defense clause in the Pennsylvania state medical society constitution as commercialism? It is only defending us against the

same kind of thieves, robbers, knaves, and blackmailers, except that the state protects by wholesale, while the petty robber of our society tries to rob us in daylight by retail, and dodges behind a magnanimous law to help him do it.

I dare say those who despise the methods of the R. P. P. A. in trying to meet this variety on their own grounds would, if pinched by the law in a case of malpractice, be among the first to avail themselves of the shelter afforded by *this* act of our *state* constitution.

Is the practice of medicine a legitimate business? Or is it simply an eleemosynary necessary evil, existing in every country, to be used at the beck and call of everyone needing our services; and we, the willing packhorses of all, working quietly, uncomplainingly for glory we never get, for thanks grudgingly given, and soon forgotten? Or, are we going to favor a make-up of sterner stuff, and run our business on business methods, taking care of ourselves, our families, and our creditors?

My friends, this is an age of "hustle." No one cares today "who your grandfather was or what he did." The question is: "Who are you; can you make good?" This is no age for moping over the graves of dead ethics and traditions of past centuries. New generations have arisen, new issues and customs are facing us. Are we progressives or are we reactionaries?

Am I standing in the presence of one member of the medical fraternity who is such a lover of his fellow man that he practices medicine for the cause of humanity alone? Nay, nay. In the dim and misty past such an individual may have lived, who so loved his fellows that he was willing to offer himself a living sacrifice for the amelioration of the ills of the race. But not in this age does that variety of the genus homo exist; except it might be among the fraternity of unlearned and unregistered so-called midwives who render their services free from love of curiosity more than the advancement of the cause of humanity.

Care for the Poor

While the soul revolts at the commercializing of distress, the refusal of the physician to attend the sick-bed of poverty because no fee is forthcoming is condemned, and justly so. But far be it from us ever to oppress God's poor and unfortunate in trying to squeeze the money coming to us out of their weary and careworn bodies, money they

need for food and clothing worse than we. But, the professional beat, the man who believes it cheaper to move from the community than pay rent and doctor bills; the man who comes to you with words of honey on his lips, who has heard "afar off" of your great skill, of your wonderful medical and surgical attainments and wants to enrich you with his clientage, who lies awake nights to evolve schemes to "skin" you, he "laughs at your calamity" when, after the skinning process is most complete, you, in your innocence, suggest some tangible evidence of his gratitude.

Then we have the "boozer," he of the red nose, who always can dig up "cash in hand" for a quart of the "fruit of the still," but none for medicine for his sick wife and babies. You, as a great philanthropist and purveyor of charity, are expected to come boldly to his relief at times like that and show to the world what a sweet-scented angel you are.

Oh, ye of little faith, you objectors to our business methods, get down off your slender perch of false dignity. The world knows you are only men, after all. Do not preach the doctrine of high ideals when it costs you nothing. Come out in your true colors, and say, with the members of the R. P. P. A.: "We believe you are right, eternally right, in coming to your own by telling each other who will or will not pay you for your services."

Look at this matter as a business man of the year 1912, instead of as the ultra idealist, spinning fine-haired ethereal logic. Give us more of the tangible things of life that lead to the possession of the "long green," and less of your hot-air logic. Self-denial, self-control, lofty thinking, right living is all very commendable, and can be practiced by every physician. But in the meantime collect your bills, so that your nocturnal slumbers may not be broken by the howls of the wolf at your door.

The tax that the deadbeat places upon us, as citizens as well as professional men, is greater than that imposed by all branches of government. It is greater than the loss from honorable thieves, robbers and burglars, who at least do something to earn a living, and do not sneak behind the law for protection. We think we are doing this class a kindness to teach them the simple rules of honesty.

Do any of you here today have any idea what amount is reported delinquent every month in our little book? Take the time to count it up, and you will find it foots up in the neighborhood of \$40,000 each month. A tidy sum, which, if divided among us,

would enable us to take a vacation, at the expense of the despised "deadbeat."

The Physician's Business Struggle

The real physician of today is "having the time of his life" to maintain his place in the eyes of the general public as a man of scientific attainments and as belonging to an educated profession, amidst the legion of religious faith-cures, Osteopaths, Eddyism, esoteric teaching, pathies, and farcical and meaningless combinations of letters to designate the kind of healer and befog the minds of the public, and by their various means amuse the patient while nature effects the cure.

Ignorant good-for-nothings, who are too lazy to earn a livelihood at street sweeping or shoe mending, can hang out a sign as a doctor; if not an M. D., then simply change the letters to D. M., and, forsooth, he is a doctor of magnetics, or drop the M., and supply the next letter, and you are an N. D., this by interpretation meaning naturopathic doctor—which is so easy that any paranoiac is competent for a degree.

Yes, this is a glorious country. All hail the medical freedom, freedom not only to fleece the public but the regular, hard-working, honest physician as well, and call it business.

To me the finest type of manhood is the honest, fair, upright physician, virile by virtue of his environment, self-reliant and resourceful by reason of necessity. Exalting common sense above fine-spun theories. Dealing with all conditions with breadth of grasp and vision that proves him to be the ideal of his profession. His patients are known as his friends, and not as commodities for gain. Who so base as to impute to him commercialism, who so evil-eyed as to begrudge him the hard-earned fruits of his labor? Yet, at his best, he is misunderstood, mistreated, and, like the once popular but now discredited "hown dawg," is constantly "kicked aroun"

by a certain unkind and ungrateful public, who, having profited by his knowledge, skill, self-sacrifice and self-denial, turn upon him "to rend him." And he, by the inexorable law, is supposed, when smote on one cheek, to turn the other.

Today the medical profession is struggling to establish a most potent agency for the prevention of disease, a national department of health. And how illogical and incongruous seem the elements that enter into the struggle, a great profession fighting to limit the sphere of its own activities, to destroy piece-meal its own business.

Against us, are arrayed the self-interest man, the nostrum vender, the advertising sure-cure man, cults, pathies, and the hordes of those who thrive on human credulity and fatten on human despair; while the great public, for whom the profession is making the good fight, is either not lifting a hand to help them, or they are arrayed on the side of the opposers.

The R. P. P. A., as an organization, has been sorely misrepresented and misunderstood; many times "stabbed in the house of its friends." But, amidst all the warfare against us, we are going on, and gaining in numbers and influence every day. In many ways we have gone far beyond the conception of its founders, have outgrown the suit of clothes provided for us at our christening, and I believe in some respects outgrown the limitations placed upon us by our laws, which might stand overhauling, especially in regard to the enlightening of the public as to our aims and purposes, so that they might understand that "we are the enemy of no honest man." As it is now, we are being tried and condemned, and, by our silence, plead guilty, and do not raise a hand to prevent the execution of the sentence. Carefully prepared and censored articles for the public press, I think, would be a fruitful means of setting us right with the public.



The Use of the Obstetric Forceps

A Chapter of Practical Suggestions

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

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EDITORIAL NOTE.—Dr. Rittenhouse deals with facts, not with theories. Out of a most extensive experience he shows the general practitioner how to meet the daily problems of his obstetric practice. This paper is one of a series.

IT IS perhaps no exaggeration to say that modern obstetrics dates from the invention of the obstetrical forceps. For, in spite of the harm done with this instrument by the reckless or unskilled, in spite of the prejudice against it, both in the profession and among the laity, the fact still remains that its possibilities for good are so great that it may well be questioned whether even the discovery of chloroform exceeds it in importance to the parturient woman.

There is still a prejudice against the forceps, which is quite widespread among the laity and even prevails to some extent among the profession. This prejudice is aptly expressed in a remark attributed (whether rightly or wrongly I do not know) to Sir Astley Cooper. In advising a young doctor, he is reputed to have said, "Buy a good pair of forceps, take it home and leave it there." The idea was that if the doctor met a case in which the forceps was really needed he could send for it, while in ordinary cases its not being at hand would save him from the temptation to use it rashly.

This ultraconservative attitude toward the forceps still prevails to some extent in the profession, although there has been a great change in the last twenty-five years. Undoubtedly so far as the ignorant or reckless doctor is concerned the old attitude is the desirable one, but unfortunately those two classes are just the ones who pay no heed to conservative advice. The man who knows his anatomy and the mechanism of labor thoroughly, and who is habitually careful, is not likely to do harm if he always carries his forceps with him in every case. He will be able to prevent a vast amount of suffering which he could not prevent if he habitually left his forceps at home.

So far as the laity are concerned, their prejudice is largely due to the visible injuries which they occasionally see after a hard forceps delivery. But a little judicious explanation will often enable them to understand that the use of instruments in such a

case was not only unavoidable, but actually saved the patient from greater danger.

Let us suppose a child's head shows injuries from the blades and the father is inclined to murmur. I say to him, "Yes, that is unfortunate. But, if I had to pull as hard as that, what do you think would have happened if I had not helped? Do you not see that the mother could never have exerted so much force, and that both she and the baby would have died without help?"

The Misuse of the Forceps

Excluding all unavoidable injuries, there still remains a considerable list of well-grounded objections to the use, or rather misuse, of the forceps. Unfortunately it is true that there are today, as in the past, many instances when the forceps is applied where it should not be, and where it is badly handled after it is put in place. There are injuries to the child's head, vesicovaginal fistulæ, rectovaginal fistulæ, and tears through the sphincter-ani muscle, many of which might have been avoided.

Most of us can look back over our own early experience and recall a sufficient number of such cases to inspire us with due humility in contemplating the subject. And, yet, when we consider how little teaching we had on the practical details of the art, the wonder is that results were no worse.

I think I had as good teaching in obstetrics when I was at college as anybody had in those days; I since have had access to all the textbooks on the subject; and, yet, nearly all the practical knowledge of the use of the forceps that I possess I learned in the school of hard knocks, by making mistakes and then profiting by them, learning how to avoid them in the future.

If I were to make a criticism of the teaching of this subject (and this is not in a captious spirit), I should say that it does not go sufficiently into detail. Minute and simple details, that seem to the teacher too obvious to mention, may be "the very water of life"

to the young doctor who is "up against it" with his first bad case. If this article will help some beginner along the rocky road that I stumbled over alone, I shall feel well repaid for writing it.

One of the first things that the beginner has to learn about the forceps is under what circumstances to use it. The inexperienced doctor should limit himself at first to the easiest class of cases—those where the head needs help in passing the inferior strait. As experience gives him more confidence in himself he may attempt the more difficult and complicated conditions.

The Easiest of Forceps Operations

Helping the head through the inferior bony ring is not only the easiest of all forceps operations, but is also by far the most frequently indicated. I know men who have practiced obstetrics for a generation who have never made any application of the forceps but this. In the more difficult classes of cases they always call counsel.

Students at college are not always given a sufficiently clear idea of the distinction between these different conditions calling for the forceps. They too often go out with the idea that the application of instruments is a sort of panacea for all conditions of delayed or difficult labor. I am not infrequently called to apply the forceps only to find that it is not indicated, and sometimes even its use would be impossible. Worse still, I sometimes find that it has been applied, or the attempt made to do so, with serious results to the patient.

In a typical case of low application of the blades the clinical picture is somewhat as follows:

The os is fully dilated so that the cervix has slipped up over the equator of the head out of reach; as soon as this happens the head descends rapidly through the pelvic canal until arrested by the inferior strait. By this I mean the inferior bony ring, and not the vulvar ring of soft tissues. Students do not always get this distinction clear. The bony ring is higher up than the vulvar ring, and as long as the head is arrested at the former there is no strain put upon the latter. When the perineum begins to bulge at each pain, and the vulva to dilate, we know that the head is passing the inferior bony strait and the forceps will not be needed.

But in some cases the head does not readily pass the inferior bony strait. A certain amount of delay here is normal, while the pressure gradually molds the head, making

its diameter less, while at the same time the mother's tissues are crowded and compressed against the bony walls making the passage more roomy. But, if the head is unusually large or the bony pelvis unusually narrow, the delay becomes so great that the mother is exhausted and help must be given.

When to Give Assistance

How long the head should be permitted to remain at the inferior strait before assistance is given is a question that cannot be answered categorically. It must depend on circumstances, and what circumstances justify interference depends somewhat on the views of the operator. My own custom is to give assistance early if it seems to be needed.

I can see no good reason for withholding early assistance if the patient is much exhausted or the contractions are lacking in force. If the contractions are powerful and yet produce no results within a reasonable time I think assistance should also be given, for the conclusion may be drawn that the head is large compared with the pelvic ring. The time required for the head to pass the inferior strait cannot be foretold.

Early assistance is safe in either of these two cases: If little force is required the forceps will do no harm; if the head passes with difficulty, help will be unavoidable and it is better to give it early than late. If the head stands absolutely still at the inferior strait for half an hour I have no hesitation in giving assistance in most cases. To let a woman suffer at this stage, for two or three hours, a combination of agonizing pain and exhausting muscular effort, even if she finally succeeds in delivering herself, seems to me to be bad obstetrics.

To say nothing of the bad effects of utter exhaustion, would we in any other department of medicine or surgery permit such prolonged suffering if we were able to prevent it? I think not. I have for some years endeavored so to manage my obstetrical cases as to avoid great exhaustion, and the results have fully justified me.

The woman who feels comparatively fresh and strong when her labor is over is more apt to make a good and prompt recovery than the one who is in a state of exhaustion bordering on collapse. The resistance to disease, or rather to morbid influences, which the normal human being possesses is undoubtedly the chief factor in the maintenance of health, and great exhaustion certainly lowers that resisting power.

(To be Continued.)

Gonorrheal Arthritis

How to Prevent and How to Treat It

By E. J. ANGLE, M. D., Lincoln, Nebraska

EDITORIAL NOTE.—In this installment of his series of articles now appearing in *CLINICAL MEDICINE* Dr. Angle broaches ideas which are as practical as they are novel. Note especially his suggestion for the prevention of gonorrheal arthritis by bacterin treatment.

THIS complication occurs in from two to five percent of all cases of gonorrhea. Women are relatively less frequently affected than men, no doubt because of the absence of a prostate and seminal vesicles in the gentler sex. Children are especially susceptible to the disease, and may develop it from the slightest local lesion.

It is well to remember that gonorrheal arthritis is not limited in its origin to gonorrhea of the urinary and sexual tracts. Lydston reports a case in a child three weeks old. Forty-eight hours after birth, the child developed gonorrheal ophthalmia and two weeks later the left wrist and the right knee became involved in an acute arthritis. A colleague, Dr. J. F. Stevens, has just reported to me a case in a babe of two weeks, following ophthalmia, and affecting both wrists.

Gonorrheal arthritis is but a single expression of a general septicemia. In addition to the synovial membranes, we may have involvement of the bones, tendons, nerves, bursæ, endocardium, pericardium, and the meninges of the brain and cord. The systemic poisoning may be due to the gonococcus alone or to associate infection with the germs of suppuration, such as the staphylococci and colon bacilli.

There is considerable evidence to show that the organisms are not invariably present in the affected joints, and that the symptoms may be due to toxalbumins elaborated by the gonococci. This view is supported by the fact that frequently, when the original nidus of infection is removed, the disease rapidly disappears without any local treatment.

Certain individuals, and particularly those of a rheumatic or gouty type, show an idiosyncrasy to this affection. One attack seems to render the joints more vulnerable to subsequent infection and it is not uncommon to find patients who give a history of joint involvement with each succeeding urethral infection.

The time of appearance of the arthritis is seldom before the second week and never before the gonococci have reached the deep

urethra. It seems to be less frequent in those having such complications as bubo and epididymitis. The knee, ankle, wrist, and elbow are the joints most frequently affected, and in the order mentioned.

Classification of Gonorrheal Arthritis

Clinically we distinguish three forms of gonorrheal arthritis:

1. Hydrarthrosis, which is generally confined to a single joint and usually attacks the knee, but occasionally the ankle or elbow. It comes on insidiously and the symptoms are subacute or chronic in character. It is characterized by the large amount of effusion present and a tendency to chronicity.

2. A variety resembling acute rheumatism. Several joints are involved, fever is present, and the usual symptoms of acute localized inflammation.

3. The synovial sheaths of tendons and muscles and the bursæ are attacked. The condition is usually accompanied by vague pains in the joints, but there is no swelling and function is undisturbed. There is tumefaction along the course of the tendons and at times redness of the overlying skin and considerable pain on pressure. The bursæ along the heel need especial mention: that between the tendo Achillis and the os calcis, and that beneath the inferior portions of this bone. The fore-patella bursa should be mentioned, since the effusion is at times extensive and may simulate an arthritis of the knee-joint.

A clear conception of the pathology of this disorder is necessary to formulate rational and effective treatment. Koenig recognizes four varieties: (1) Arthritis with serous effusion; (2) arthritis with serofibrinous and catarrhal exudate; (3) empyema of the joint; and (4) phlegmon of the joint.

In the first variety, there is little structural alteration in the synovial membrane and the joint is more or less distended with a clear, serous fluid.

In the second form, the synovial membrane is the seat of more decided infiltration and the fluid contains flocculent masses of fibrin.

In the suppurative variety, which is more severe though less common than the preceding, the joint cavity is filled with pus. We usually have to deal here with a mixed infection.

The fourth, i. e., phlegmonous variety, and fortunately the rarest, works the greatest ravages on the joint and surrounding structures and is therefore followed by the greatest functional disturbances. This might better be termed an osteoarthritis, since the primary focus is in the articular ends of the bones and involves the joint secondarily. Here we find disintegration and erosion of the articular cartilages and infiltration and thickening of the other structures of the joint.

The Differential Diagnosis of Gonorrheal Arthritis

This disease must be differentiated from rheumatism, acute and chronic; from simple synovitis; from gouty rheumatism; and from tuberculous and syphilitic diseases of the joints. One of the most important steps in the diagnosis is the history, and, if it points to a recent attack of gonorrhea, in a large proportion of cases foci containing gonorrhea can be demonstrated in the prostate gland or seminal vesicles.

The symptom-complex of gonorrheal arthritis is quite distinctive from that of acute rheumatism. In gonorrheal arthritis, the fever is not so high, there is less prostration and sweating and an absence of the sudden subsidence in one joint and the equally sudden metastasis to another, as seen in rheumatism.

The pain symptom is quite characteristic. As long as the joint is at rest, little if any complaint is made of pain and the patient is fairly comfortable. I may add that there is no leukocytosis, as is found in general septic affections.

Chronic gonorrheal arthritis is far more difficult of diagnosis. There is no question in my mind that no inconsiderable percentage of the cases diagnosed as chronic rheumatism, neuritis, neuralgia, etc., are gonorrheal in origin and will respond only to specific treatment. If there is a history of a gonorrhea, no matter how many years past, the urethral canal and adnexæ should be carefully examined, and pus (if present) and all the secretions secured by massaging examined for gonococci. If the seminal vesicles or prostate appear diseased, massagings should be repeated until six negative findings show that their secretions do not harbor gonococci. Fuller believes that the seminal vesicles are

affected in every instance of gonorrheal arthritis in the male.

Aids to Diagnosis

We have several aids to diagnosis, one or more of which are available to every practitioner in the land:

The Complement Fixation Test.—This is an examination of the patient's blood for specific antibodies, and is made along lines similar to the Wassermann test for syphilis. I have found the findings of this test altogether dependable.

The injection of gonococcic vaccine as a diagnostic measure.—This bacterial vaccine is injected in a dosage of from 100,000,000 to 200,000,000, and if gonococci are present there follow a febrile reaction and pain in the joints, prostate, or other points of infection.

London has recently used a method which corresponds to the Hamberger "stich" method in tuberculin diagnosis. The skin of the inner surface of the arm is cleansed with alcohol or ether and a suspension of dead gonococci (100,000,000 to a Cc. of normal saline solution) is injected into the skin with a very fine, sterile needle. About two or three minims of the solution is sufficient, as shown by the production of a slight wheal. The injection must be in the endodermal layers of the skin and not subcutaneous. A positive reaction occurs in twenty-four hours, consisting of a central papule red in color, surrounded by a lighter areola two or three inches in diameter. A similar injection of normal salt solution is used as a control.

London mentions a case of positive reaction in prostatitis occurring thirty years after the primary infection. The advantages of this test are its simplicity of application and its reliability.

Treatment of Gonorrheal Arthritis

It is needless to say that any foci of gonorrheal disease along the genitourinary tract should receive thorough and well directed treatment. These methods were detailed in our previous articles dealing with infection of the urethra, prostate, and vesicles.

As a *prophylactic*, I wish to emphasize the use of gonococcic bacterin in every case in which the prostate or vesicles become involved, or in which a general systemic reaction is present. The dose should range from 25,000,000 to 100,000,000 bacteria, repeated every two or three days. I am strongly convinced that this will free the blood stream of living gonococci and render metastasis impossible. There is scanty reference

in medical literature to the use of bacterins with this object in view.

General Treatment.—The treatment of gonorrheal arthritis is surgical rather than medical. The remedies prescribed for inflammatory rheumatism are of little benefit in this affection. I have found pure oil of wintergreen in doses of 10 to 20 drops, three times a day in a capsule or dropped on loaf sugar, of considerable value in relieving the pain. Salol or urotropin in 5-grain doses, singly or combined, are useful. At times sedatives and hypnotics, such as codeine, veronal and phenacetin, are necessary. At a later period of the disease, when debility is present, tonics and reconstructives, such as codliver oil, syrup iodide of iron, the triple arsenates of iron, quinine and strychnine, and the glycerophosphates, are indicated. In cases with considerable enlargement of the bones, I have derived much benefit from small doses (2 to 5 grains) of potassium iodide, given in milk an hour after meals. If this disagrees with the stomach, iodalbum in corresponding doses can be substituted.

Specific Treatment.—The value of gonococcic bacterins and sera are now generally accepted by the profession. In a dogmatic way, I believe the serum is indicated in the toxemic cases and the bacterin where undoubted metastatic conditions are present, in other words, a true gonococcemia. However, the serum seems just as beneficial in true metastatic gonorrhea.

In giving the serum, begin with an initial dose of 2 Cc., and repeat in two days, at which time the dose can be increased to 4 Cc., if no improvement is manifest. Later the dose can be increased to 6 or 8 Cc. The larger doses should have an interval of four or five days between them. Relief is manifest early and if no improvement is seen after the third injection it will be useless to continue. Furthermore, the vast majority of subjects will require fully 30 to 50 Cc. of serum.

The dosage of the bacterins should be moderate in acute cases, from 25,000,000 to 50,000,000, and best repeated at an interval of three to five days. As the dose is increased, the interval is lengthened. In subacute and chronic cases, doses up to 500,000,000 are at times necessary.

The technic followed is along strictly antiseptic lines. The site of the injection is unimportant, but for many reasons deep injection of the gluteal muscles is to be preferred. A majority of all acute cases will be beneficially influenced by the treatment. In chronic cases, barring those in which organic

changes have occurred, the results will be equally brilliant and gratifying.

Our French colleagues have recently enriched the serum treatment by two novel measures:

Antimeningococcal Serum.—Thirty Cc. of Flexner's or Dopter's serum is injected every second day. This has yielded especially good results in acute and recent forms. Cures have been reported after a single injection.

Autoserotherapy.—This is applicable in cases of hydrarthrosis. The fluid is aspirated from the joint and thirty Cc. of this fluid is injected beneath the skin. This is repeated in one week if found necessary.

Local Treatment of the Limb

Local Treatment.—The patient should be put to bed and the joint immobilized with a light splint. The affected limb should not be used until the acute inflammation has subsided, however mild it may be. Applications may be either hot or cold, as the patient finds most soothing. Personally, I prefer heat rather than cold. The following can be used with benefit: Compresses moistened with a hot solution of aluminum acetate, 2- to 5-percent, or with lead-water and opium solution. The compresses should be quite thick and covered with a dry towel and over this rubber tissue or oiled silk. At times, evaporating lotions will give more relief:

Tr. opii.....	ozs. 1
Liq. plumbi subacetatis.....	ozs. 1
Alcoholis.....	ozs. 6
Aquæ destillatæ, q. s. ad.....	ozs. 16

M. Sig.: Apply constantly to the joint on lint or cheese-cloth.

A 50-percent ointment of ichthyol is a favorite with many, or the ichthyol can be combined with equal parts of oil of wintergreen. Equal parts of methyl salicylate and olive oil may be used with benefit. All of these are to be applied on lint or flannel, covered with cotton and over this a bandage.

When the inflammation in the joint runs high, or where the symptoms point to suppuration, the ice-bag is unquestionably the best application.

Later on, as the acute symptoms subside, the treatment should be directed toward absorption of the fluid in and around the joint. Many measures are recommended, among which are light touches of the Pacque-lin cautery, blisters, iodine, iodine-petrogen, ichthyol, dilute mercurial ointment and the rubber bandage.

Hyperemic Treatment.—This method has not received the attention in America which it

deserves. Its use has been a revelation to me and has largely superseded other local measures. Bier, himself, writes: "Yet much more marked is the effect of hyperemia by damming on that form of gonorrheal joint inflammation which is so extremely painful. In these cases, the pain becomes easier in from one-half to one hour from the application of the rubber bandage."

In the damming, a thin rubber bandage is used. This is applied moderately tight in several layers around the limb, reasonably well above the joint. It will soon be noticed that the superficial veins swell, that the skin becomes red and that the limb becomes larger and edematous, and at the same time the skin becomes warmer to the touch. Pain rapidly ceases and stiffness in the joint gradually becomes less.

If the pain increases, the bandage is too tight. Everything depends upon securing the proper degree of hyperemia. The arterial circulation must be unimpeded and the return venous flow checked, but not entirely suspended. Previous painting of the joint with tincture of iodine will increase the hyperemia.

In the beginning of treatment, it is best to leave the bandage *in situ* for only a few hours; but the duration is rapidly lengthened until the periods are ten hours during the day and ten hours at night. The benefits are threefold: (a) Relief of pain; (b) destruction of bacteria, depending upon increased quantity of serum and leukocytes flowing through the diseased joint; (c) the absorption of fluid and liquefaction of the fibrinous products in the joint.

Surgical Treatment of Gonorrheal Arthritis

If after a period of two or, at the outside, three weeks, with a treatment such as outlined above, no improvement is manifest, it is not only justifiable but imperative to resort to operative measures.

The joint is first aspirated and, if the fluid withdrawn is perfectly clear, no further intervention will be necessary. Should it prove to be the serofibrinous form of gonarthrosis, which is by far the most frequent, an arthrotomy should at once be performed.

The incision should be fairly free and the joint cavity thoroughly freed of any fibrinous flakes that may be suspended in the fluid or deposited on the articular surface. The con-

tents of the joint consist of a thick, flaky fluid containing numerous pieces of fibrin ranging in size from a grain of rice to a Lima bean. The joint is then thoroughly irrigated with a bichloride of mercury solution, 1 : 2000, followed by normal salt solution. Solutions of iodine, phenol or emulsion of iodoform may be used if preferred by the surgeon. A drainage tube is inserted, to be removed after four or five days. The joint is then immobilized and moderate compression applied with a bandage. It is understood, of course, that the joint is opened up under the most rigid asepsis.

After the wound has healed and the inflammatory process has entirely subsided, gentle passive motion and massage is begun and later the patient is allowed the use of the limb. We should, however, err on the side of conservatism, since there may be danger of lighting afresh the inflammatory process by resorting to active and passive motion too soon.

Empyema of the joint is fortunately rare, and when present not only the patient's limb but even his life is in danger, and if the latter is saved we cannot promise too much for the former. Here there is but one course to pursue, immediate opening of the joint, antiseptic irrigation and drainage.

In the phlegmonous type, early immobilization of the joint is imperative, since all the component parts of the joint are involved in the inflammation. A plaster cast will best keep the parts at rest. Later, an arthrotomy may be necessary and should not be too long delayed if the previous treatment has not produced a subsidence of the symptoms.

Indolent bursæ are best treated by the injection of a few drops of a five-percent solution of carbolic acid or a twenty-five-percent solution of tincture iodine with a hypodermic needle.

Summarized, the treatment is as follows:

The customary internal and local treatment has little influence on the course of gonorrheal arthritis.

The best results are obtained by the bacterins and serums, associated with the early use of Bier's hyperemia treatment.

Early rest and immobilization of the joint is necessary.

In a limited number of cases surgical intervention is necessary, and if indicated should not be too long delayed.



The Active-Principle Treatment of Pneumonia

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—This is the final lecture in the course delivered by Dr. French to the students of the Boston College of Physicians and Surgeons. We hope every member of the "family" has read—or will read—every installment.

PERHAPS I can conclude what I have to say to you about active-principle therapeutics in no better way than in giving you a practical illustration of its application to everyday disease; and in doing this, I am going to choose as my subject that most common, most serious and fatal of all our acute diseases, pneumonia. My reasons for this are, first, that I know of no disease which it is more important for you to be able to approach with confidence and handle with success; and, secondly, that the treatment which I shall describe has in this disease won the finest laurels.

"Pneumonia is a self-limited disease and runs its course uninfluenced in any way by medicine. It can neither be aborted nor cut short by any known means at our command." Such is the dictum of Osler, who is perhaps the most widely known English-speaking medical teacher in the world; and through the influence of his great name it has obtained wide circulation and a very general acceptance.

However, this idea is the emanation of the rankest drug-nihilism, the purest theory of the prince of drug-nihilists. It reduces the doctor to the position of a very inferior grade of head nurse, whose duty it is to watch the patient's symptoms while he is dying and then to certify solemnly that there was no help for him.

The active-principle doctor does not accept this dictum, does not believe this theory. He believes that it is his duty to *do something* in the sick-room. More than that, he believes that it is in his power, not only to lessen suffering, but to modify disease and to lengthen life. He is the kind of doctor whom I want to attend me when I am sick. I leave it for you to settle it for yourselves whether or not you agree with me.

The way in which the theory of Osler works out in practice is well illustrated by a story told by a well-known physician at a medical meeting in my home town, some years ago, when the members present were

discussing the different methods of treating pneumonia.

A Personal Experience

When this doctor was a senior medical student and was just entering upon the first day of his service as interne in a large hospital he was confronted by what he diagnosed as a severe case of pneumonia, and he naturally felt in a quandary as to what he should do for it. Not being able to settle the question to his own satisfaction, he waited with some impatience the coming of his instructor on his daily rounds. This worthy soon made his appearance and questioned our novice as to the nature of this patient's disease. The young interne replied that he thought it was a case of pneumonia, and he anxiously asked what he ought to do.

"Hm-m-m," was all the learned professor vouchsafed, passing on to his next patient.

Fearful that something was wrong, the interne followed after him and repeated his question.

"Hm-m-m," again hummed the instructor, as he appeared to be wholly absorbed in the case at that moment before him.

Seeing that it was impossible for him to get any satisfaction at this time, the young doctor waited until the professor had finished his rounds and was about to take his departure, when he screwed up his courage and approached him once more, repeating the inquiry, what he should do for his pneumonia patient.

"Y-y-young m-m-man," replied the professor, who was an inveterate stammerer, "it m-m-makes such a d-d-d-damned little d-d-difference what you d-d-d-do in these cases that I have d-d-d-decided to let you exp-p-periment for you-you-yourself."

"And," added the doctor as he told us the story, "I have been experimenting ever since."

If, now, young ladies and gentlemen, you can get some ideas that will enable you to approach your first case of pneumonia with something of a definite idea of what you want

to do, and how it can be done, you will find that this frame of mind will give you a great advantage over that of the man who accepts the Oslerian doctrine that it makes no difference what you do. You will have confidence in yourself; and this will get you the confidence of your patient and his friends. These two combined will prove to be the fulcrum upon which you can rest your lever of active-principle medication and move the world. For to you, to cure your patient, is to move the world.

In the treatment of pneumonia (or, for that matter, of any other disease), you have to consider three things: (1) the patient, because no two persons are alike in appearance and constitution or in physical vigor and the power of resisting disease; (2) the disease, because the severity of a disease depends in part upon the intensity of the infection, and the same disease varies in its manifestations at different times and under different conditions; (3) the treatment, because no two persons require exactly the same treatment, even when the symptoms are practically the same; and, also, because similar results often may be produced by different methods of treatment.

Use the Best Obtainable Remedies

And right here let me say that, while I am advocating what we call the active-principle treatment of disease, it is no part of my purpose to urge to confine yourselves strictly to the use of the so-called active principles. What we want is, not particularly active principles, but the best obtainable remedies.

We advocate this treatment because we believe that in the main, not only the remedies used, but the manner in which they are employed, are such as will produce better results than any others with which we are acquainted.

But we do not confine ourselves strictly to any one class of remedies, nor do I advise you to do so. We are practicing medicine, and our business is to cure our patients. If you can find any remedies that will produce better results—any medicinal principles more potent for good—than those I have described, by all means use them.

It is only in this spirit that we can have any progress in medicine. You must mix your colors—i. e., your remedies—"with brains": you must treat your patients with the aid of common sense and good judgment, remembering that "circumstances alter cases."

The first essential for the most successful treatment of pneumonia is that the physi-

cian should be called early—before the case is fully developed or all the classic symptoms have made their appearance. Nor, under those circumstances, should he wait for the further development before beginning active measures of treatment. To wait until it is possible to make a positive diagnosis, is greatly to lessen your chances of success.

Remember the teaching of Burggraave, that the great end of dosimetric medicine is "*the prevention of anatomic-pathologic lesions*, for these, once established, are above the resources of art." Put this over against the dictum of Osler—and choose for yourselves.

A positive diagnosis can be made only when the symptoms are typical or the disease is well advanced. The early chill is characteristic, but in twenty percent of the cases it does not occur. Rapid respiration is common; still, the variation in this respect is so great that it is not safe to rely upon it. The quick pulse is not found in every instance. Even high temperature is not always present, and its absence has come to be recognized as a distinctly unfavorable symptom. Many patients have little or no pain in the chest from first to last, and sometimes there is almost no cough, even the rusty sputum being absent in a considerable number, especially in the aged. The crepitant r  le, when well marked and persistent, is considered almost pathognomonic, but this sign sometimes is absent.

So, do not wait for the occurrence of all these classic symptoms, but, when you find enough to indicate congestion of the lungs with fever, go to work at once to prevent, if possible, that further progress of the disease which alone will render a positive diagnosis possible.

If there is a feeling of oppression and tightness across the chest, with pain and difficulty of breathing, I know of no better remedy than a mustard poultice applied to the affected part and allowed to remain until the pain is relieved and the breathing easier, when it may be replaced by an antiphlogistine poultice or a cotton jacket. If there is no pain or difficulty of breathing, the antiphlogistine—or any other "clay poultice"—may be applied at first. Under these conditions, many physicians prefer not to make use of any external applications whatever.

In nearly all cases of pneumonia a thorough clearing out of the intestinal canal at the outset is desirable. In cases characterized by constipation, nausea, and a coated tongue, you may give 1-6 grain each of calomel and podophyllin every half hour until a grain

has been taken, and follow in two hours with a heaping tablespoonful of a laxative saline. Or, if the case comes into your hands at night, you may give a single dose of a suitable purgative, such as the "triplex pill," composed of aloes, blue mass, and podophyllin; and in the morning follow with the usual dose of the saline laxative.

In either of these ways, or in various others, you will be pretty sure to secure thorough elimination, which is an important point. After this, the bowels should be kept clean, securing at least one free movement each day, and for this purpose the saline laxative is often sufficient.

To Reduce High Temperature and Relieve Congestion

We come next to measures for the reduction of the temperature and the relief of congestion, using for this purpose remedies acting through the vasomotor nervous system. The great active-principle vascular sedatives are aconitine and veratrine, either alone or combined with the tonic alkaloids strychnine and veratrine, as in the dosimetric trinity and the defervescent compound.

In children, in delicate women, in the weak, the aged, the debilitated, and in all patients showing a tendency to asthenia, the preferred remedy is aconitine. So far as the pulse is concerned, the special indication for aconitine is the small and frequent pulse.

Veratrine, on the other hand, is the remedy of choice in strong and vigorous adults, and in all subjects showing symptoms of a markedly sthenic character. Its special indication is a rapid, full, and bounding pulse. In the same case veratrine may be required at one stage of the fever, while aconitine is called for at another.

Both these remedies are of the greatest utility in the early stages of the fever, and as a rule neither one should be given in the later stages, or in any stage of cases marked by great debility and lack of vitality, except as guarded by one or both of the tonic alkaloids, strychnine and digitalin. Indeed, knowing that if the disease runs its course the greatest danger in pneumonia arises from the strain upon the heart, the alkaloidist deems it wise to guard against any weakness in this direction from the first, and therefore often prefers to use the dosimetric-trinity granule from the first in all severe and markedly asthenic cases, and the defervescent granule in sthenic cases.

The standard granule of aconitine hydrobromide is 1-800 of a grain, and of veratrine,

1-128 grain. These are the minimum adult doses, and are best given dissolved in a teaspoonful of hot water. If the fever is 103° F. or higher, this dose may be given every fifteen minutes for a few times, then every half hour until the fever begins to lessen, as shown by the tongue becoming moist, the pulse softer and slower, and the temperature lower. When this effect has been produced, the remedy may be given every hour as long as it is considered necessary to continue the effect. If the initial fever is below 102° F., give the dose only half-hourly from the first.

These are general directions, to enable you to make a beginning. But always remember that there is no fixed or arbitrary dose or frequency of administration, *the only object being to produce the desired effect*. Some patients are affected very easily, others only with great difficulty. Some people are very hard to sweat, but I have noticed that even in these cases the fever generally declines in about the usual time under the influence of these remedies.

Strychnine and digitalin are tonic remedies, and their use is well understood by medical men of all schools. Strychnine is the great nerve tonic, and is especially indicated where there is imperfect or enfeebled respiration or a condition of general relaxation of the whole system. Digitalin is the great cardiac tonic, strengthening the heart and slowing the pulse. When given alone in considerable doses, it may sometimes be objectionable on account of its tendency to increase the blood pressure, but when combined with aconitine and strychnine, as in the trinity granule, this effect is prevented. The standard granule of strychnine arsenate is 1-128 grain, and of digitalin, 1-64 grain; and these doses may be given with perfect safety in the same frequency as the aconitine and veratrine, when combined with these drugs.

There is one other active principle which I have learned to use in those cases of pneumonia which are complicated with pleurisy, as shown by a sharp "catching" pain in one or the other side when breathing. This is bryonin, a glucoside derived from *bryonia alba*, a remedy of which you probably know very little. It is a remedy for serous membranes, and is especially indicated in pneumonia when there is felt a sharp, cutting or stabbing pain in the side, made worse by motion.

I will mention one other remedy which I have used with much success in the treatment of pneumonia, and which I desire to recommend to your favorable attention,

although I do not claim that active-principle therapy has any mortgage on it.

General Antiseptic Treatment in Pneumonia

If pneumonia is a germ disease, as is now universally accepted to be the case, then nothing can be more appropriate than an antiseptic treatment. For this purpose I know of no more effective agent than creosote, which is eliminated largely by the lungs, and is entitled to be termed a respiratory antiseptic. Sajous declares that creosote is as nearly a specific in pneumonia as is quinine in malaria. Beverley Robinson, of New York, was one of the first to advocate its use in lung diseases. Van Zandt, of Texas, has been especially prominent in recommending its use in pneumonia. He has found it to abort a considerable proportion of cases, to modify favorably the symptoms and shorten the course of a still larger proportion, and only in a small proportion to fail of influencing it in any way.

Creosote carbonate is the preparation commonly used. Sajous gives it in 10- and 15-grain doses every two or three hours. Van Zandt gives two and one-half drams in twenty-four hours as an average adult dose, and divides this amount into either two or four doses. My own experience has been with the preparation known as thicol. This is a made-in-Germany, patented preparation, chemically known as the guaiacol sulphonate of potassium.

The main advantage which I find in this, over the cruder preparations of creosote, is the fact that it has very little taste, and may be given in any desired dose without disturbing the stomach. A great disadvantage is that it is still sold at the high price of patented preparations. I give it in 5-grain tablets, two tablets every four, three, or even two hours to an adult, and I have never had any bad symptoms. It is a valuable addition.

Reasons for Failures in Practice

With the treatment thus briefly outlined, it is possible to abort a considerable proportion of cases. That this result cannot be secured in all cases, is due to one or more of the three following causes:

1. Lack of vitality in the individual, so that the system does not react favorably to the medicine.
2. Unusual intensity of the infection, such that the vital forces are overwhelmed by the first onset of the poison.
3. Late beginning of the treatment or lack of thoroughness in carrying it out.

But even when the fever is not aborted, the course of the inflammation is almost always favorably modified, and it runs a shorter course than when left to nature, with fewer alarming symptoms and far less danger of failure of the vital forces than is seen when the coal-tar products and other depressing remedies are used.

After the crisis is passed and the fever is gone, only a condition of weakness and depression remaining, it is better to omit the aconitine from the dosimetric trinity and to rely upon the tonic effects of strychnine and digitalin alone.

You will observe that from the beginning we have guarded against danger from weakness of the heart, using for that purpose the tonic remedies strychnine and digitalin. Add one other needed drug, and most of the cardiac dangers in pneumonia may be satisfactorily met.

Glonoin, or nitroglycerin, is the great emergency remedy, relaxing the tense arterioles, and letting the blood go free when the heart is overburdened. With the active-principle therapist this drug takes the place of alcohol, in a very large degree, compared with which he finds it quicker in action, freer from danger, and more satisfactory in results. Instead of the usual dose of 1-100 grain, he prefers the dose of 1-250 grain, in granule, repeating this as may be needed to secure the desired result. This is one drug which is said to act more quickly when absorbed from the mouth than when injected subcutaneously. When properly used, it works wonders.

Treatment of the Cough

The cough of pneumonia seldom requires more than four drugs, and these are emetine, apomorphine, codeine, and calcium sulphide. Emetine is especially indicated by deficient secretion; apomorphine by a thick, viscid, and tenacious secretion; codeine by the cough of irritation as distinguished from the cough of expectoration; and calcium sulphide by a hoarse, harsh, hard cough, with putrid secretion. The dose of emetine and apomorphine each is 1-64 grain, and that of codeine may be 1-64 or 1-12 grain, according to the nature of the case. They may be given either separately or combined, in aqueous solution, every fifteen to sixty minutes as indicated.

I have come to depend upon this mixture, which I call the A-C-E mixture, for use at the bedside, to loosen a tight cough, to the exclusion of almost everything else. The calcium sulphide is especially useful in the cough of bronchopneumonia, measles, whooping-cough,

and the like. It is best given in 1-6-grain granules every hour, and may be given without dissolving, care being taken to take a few swallows of water with each dose.

I can only give you the outlines of the use of any of the remedies named. You must learn their more intimate uses from your own experience, by getting used to them. Then you will know what they will do.

You will see that my idea of a drug to be used in the treatment of disease is something like that of a friend whom you depend on for help and comfort in the work of life. You must get acquainted with your drugs before you can use them to advantage, before you know what they will do, and how long they will last. If they are the real thing, the more intimate your acquaintance with them the better you will like them, and the more you will learn to depend upon them. If they are only shams, you will soon find it out, and the sooner you get clear of them the better.

Drugs are like friends in another respect. It is better to have a few good ones, old friends that you know and can depend upon, than a host of new ones, passing acquaintances, "said to be good," "highly recommended," but not known to you from your own experience.

I have not spoken of the importance of fresh air and plenty of it, of bathing, good nursing, proper nourishment, and many other things essential to the proper treatment of pneumonia, because their importance is recognized by all physicians, and their use is not confined to one school of medicine or system of practice. These things play an important part in determining the issues of life and death.

Now—to sum up:

The active-principle treatment of pneumonia should begin early. Its first aim is to abort the disease.

For the digestive tract: "Clean out, clean up, and keep clean." Calomel, podophyllin, and salines are the preferred laxatives. Give liquid nourishment. "Keep on the right side of the stomach at all hazards."

For the pulmonary congestion: Counter-irritation by mustard; depletion by anti-phlogistine.

For the fever and the heart: Aconitine and veratrine; strychnine and digitalin; glonoïn.

For the cough: Apomorphine, codeine, emetine, calcium sulphide.

For pain: If slight, counterirritation, codeine, bryonin; if severe, morphine hypodermically.

Watch the patient. Dosage to effect. No alcohol.

Preventive Medicine, and the Army Medical Corps*

By RICHARD SLEE, M. D., Swiftwater, Pennsylvania

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EDITORIAL NOTE.—In this communication Dr. Slec presents, in a convincing way, the truly remarkable results that have been obtained, by the Medical Corps of the U. S. Army, in the prevention, and eradication of many of the epidemic diseases formerly baffling medical skill; among these being, above all, yellow-fever, then beriberi, uncinariasis, typhoid fever, and, of course, smallpox. Dr. Slec urges every doctor to make the problem a personal one.

ALL of us recognize the fact, of course, that the economic prosperity of a nation depends largely upon the state of health in which its inhabitants are maintained. Illness and death are of importance, not merely to the individual concerned, or to his immediate family and friends, but every individual citizen must of necessity bear a part in the progress of a nation; and any disablement

that interferes with his or her productiveness reacts upon the entire corporate body.

Statisticians have estimated that each case of typhoid fever in any of our communities represents an average money loss of several thousand dollars—a total loss in the United States each year, according to Kober, of \$350,000,000 from this one disease alone. This calculation takes into consideration the necessary expenses of the illness, the loss of earning-power of the individual while thus

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incapacitated, the general loss to the community of his productiveness, and the cost entailed in the way of quarantine, disinfection, and other factors.

Realizing that each and every case of serious illness in this country, or in any other country, represents a very evident money loss that never can be repaid, we understand the necessity of every effort made by those in authority for the maintenance in robust working-health of the entire population.

In the United States, we have three well-equipped governmental Medical Services, in charge of highly trained specialists, and which make tremendous efforts to stamp out disease and to introduce and maintain proper sanitary conditions. These three Services are, respectively, the Medical Department of the U. S. Army; the U. S. Public Health Service (formerly called the Marine Hospital Service); and the Medical Department of the U. S. Navy. In addition to these three national Services, we have, scattered throughout the country, state and local boards of health.

In selecting the Medical Corps of the U. S. Army for my topic, it is not with any desire or intention of reflecting upon or neglecting the other branches of national Service; but for many years I have been intensely interested in the Army Medical Corps, and, holding as I do a commission in the Medical Reserve Corps, I am naturally more familiar with the work of the Army than that of the other Corps.

Reading laymen are aware of the fact that scientific medicine is of recent origin. To within a very few years, the practice of medicine was conducted, one might say, largely upon traditions. The physician did not know the cause of the majority of ailments to which human flesh is heir, and treatment of necessity depended upon medicaments that had proven more or less useful in the centuries gone by. These remedies were used with knowledge as to dosage and probable results, but without definite information as to why these results were obtained or what specific causative agent they were combating.

The introduction of the science of bacteriology revolutionized ideas and methods. One by one, especially for the infectious and contagious diseases, the causative agents have been discovered and isolated. We are able to study their life-history under many different surroundings, and to produce in susceptible animals the same or allied conditions as found in the human race. And, through these animals, we are able to carry out ex-

periments leading to the introduction of vaccines, antitoxins, and sera, as preventive or curative agents.

The Great Services of Doctor Sternberg. Discovery of the Yellow-Fever Cause

Twenty-five years ago there were but few trained workers in bacteriology. The methods then were crude and limited. In 1878, a medical officer of the U. S. Army, of his own initiative and largely at his own expense, took up this fascinating study of bacteriology more particularly as related to contagious and infectious diseases. This man was Dr. George M. Sternberg—who is the real father of pathologic bacteriology in America. Dr. Sternberg at that time held the rank of major, but eventually was advanced to the position of Surgeon-General, which position he filled with so much honor during the trying period of the Spanish-American War. He retired from active service in 1902. It may be mentioned here that, in 1880, Dr. Sternberg discovered the diplococcus pneumoniae, the causative agent of acute croupous pneumonia.

For many years yellow-fever was one of the most devastating and feared diseases of the tropics and the southern portions of our own country. Many of us can recall the frightful epidemics raging in Memphis, New Orleans, Jacksonville, and other sections of the South. General Sternberg himself contracted the disease while stationed in Florida, and nearly lost his life. Naturally he was interested in this subject, and he devoted to it an enormous amount of time and research-work in an endeavor to discover the causative agent of this scourge. He worked in Havana, in 1879, as a member of the Yellow-Fever Commission, and in Vera Cruz and Rio de Janeiro during the years of 1887, 1888, and 1889; and although it was not his good fortune to discover the actual infective factor, he did, by the vast amount of work which he carried on and published; clear up the field, so that, when in 1900 he secured the appointment of a commission of medical officers to investigate this scourge, this body was enabled to ignore many leads, and to follow directly those lines that ultimately led up to that important discovery that yellow-fever is transmitted from person to person through the agency of mosquitoes.

The investigators of this board conducted a vast number of experiments. Thus they found that nonimmune persons from the north might, without contracting the disease, and maintain perfect health, sleep in beds

in which yellow-fever patients had died, remaining in them for weeks and months under these filthy and disgusting conditions obtaining, wearing the unwashed clothes and sleeping between the unwashed bedding in which yellow-fever patients had died, provided the room be effectively screened against the *stegomyia* mosquito. And control-experiments clinched the proof. In adjoining rooms, that were scrupulously clean and thoroughly aired, but in which were mosquitoes that had been allowed to bite yellow-fever patients, other volunteers slept and permitted themselves to be bitten. Poor Agrimonte promptly contracted yellow-fever and died. Reed and Carroll, both, also had the disease, but they recovered. In addition to these three, other volunteers subjected themselves to this ordeal, and of these some died, while others recovered.

Sad to relate, Reed and Carroll paid with their lives the penalty for their intrepidity, both dying shortly afterward as a result of the infection. These two investigators did, however, discover and elaborate methods which subsequently were followed out with success by the medical officers in the army of occupation. The result all the world knows. Yellow-fever immediately was banished from regulated countries, and Cuba and other West Indian islands, Panama, Rio de Janeiro, and other danger zones have become almost as free from the yellow plague as the regions of the northern climes.

General Sternberg, with marked foresight, owing to his interest in the scientific side of medicine, in the year 1893 established in Washington the Army Medical School, where medical officers are detailed upon their entrance into the Corps. This School adds to the previous thorough training of these men a very complete course in bacteriology and other branches.

How Other Infectious Diseases Are Being Controlled

To those of us who live in the United States, the conditions prevailing in Cuba, Porto Rico, Hawaii, and the Philippine Islands before and at the time of the Spanish-American War can hardly be realized. In all of these countries little or no attempt had been made to introduce sanitation or to protect the inhabitants from contagious and infectious diseases. In all of these countries smallpox was continuously present, with a death rate running into the thousands each year. In addition to this tropic-wide scourge of smallpox, each of these countries seemed

to have certain special diseases that were more or less prevalent.

In Porto Rico, a large proportion of the inhabitants suffered from a pernicious form of anemia that sapped and undermined the constitution of its victims, and which seriously interfered with the productive output of the country.

In Cuba, the most prevalent and serious conditions were the frequent outbreaks of yellow-fever, with its excessive mortality, besides many forms of malarial infections. In the Philippines, in addition to smallpox, and, owing to the nearby ports of China, Japan, etc., frequent outbreaks of cholera, bubonic plague, leprosy, and a peculiar disease of the East known as beriberi, as well as many intestinal diseases occurred.

The Important Work of the Army

Many of us have a vivid recollection of the period of the Spanish-American War of continuous hard fighting and "hiking" in the Philippine Islands; many remember the appalling sick-rate of the troops in Cuba; but those who were not in touch with the situation cannot in the least appreciate the tremendous burdens which fell upon the Medical Department of the Army in those times.

In time of war, the Army is supreme. Civil governments cease for the time being where the operations are being carried on, and other departments do not assume control until pacification is under way or accomplished. The result of this was, that, in addition to caring for the men of the Army, medical officers were confronted in all sections of our foreign possessions by virulent contagious diseases of the types mentioned by me.

The progress and success of an army depends entirely upon the health of its men. They may be trained to the highest point of efficiency, but, unless their health is maintained, they are useless for military purposes.

With the meagre and insufficient regular army possessed by this country, it was necessary at that time to enroll thousands of volunteers. Regular troops of necessity are hardened by continuous practice and drill and are able to withstand exposures that men enlisted directly from the various walks of civil life can not. One can readily understand what a tremendous anxiety it was to the Army Medical Corps to have hundreds of thousands of these green troops thrown into districts and foreign lands, knowing in ad-

vance that these various contagious and infectious diseases were always present.

How Smallpox Was Stamped Out

One of the first steps of the Army Medical Corps was to stamp out smallpox. In Porto Rico at the time of occupancy, thousands of cases of the disease existed; in Cuba, an equally large number; and as to the Philippine Islands, it is hard to estimate how many, the death rate in and near Manila alone averaging 6000 per year.

Immediately upon occupancy and before the islands were pacified, compulsory vaccination was established. In Porto Rico, Major Hoff (recently retired as colonel) established vaccine-farms for the production of vaccine-virus, and within a period of not quite four months fully 800,000 of the inhabitants were vaccinated. The result was, that smallpox immediately ceased to exist, and in the next ten years not a single death from this disease has occurred on the island.

In Cuba, under the supervision of General Wood and Colonel Gorgas, similar methods were instituted and with the same striking results.

In the Philippine Islands, Colonel L. M. Maus was appointed First Commissioner of Health under Governor Taft, and his energetic measures directed along the same lines accomplished wonders.

The Control of Typhoid Fever

Typhoid fever has always been one of the most deplorable conditions Army authorities have had to contend with, both in warfare and in camps of any duration.

This infection is world-prevalent; the annual loss by death and disablement is appalling. It is a disease which attacks the young adult at the commencement of their career, and we have about 40,000 deaths each normal year out of approximately 400,000 cases in the civil population of the United States.

It is impossible to gather 1000 men into a command and not find some carriers to spread typhoid infection, but, to give an idea of its prevalence in war-time and to show what has been accomplished recently by the Medical Corps of the U. S. Army, I will present the following brief statistics on the deaths resulting from typhoid fever among the military.

In the Boer War, 31,000 cases, 5877 deaths. In the Franco-Prussian War, Germans, 73,396 cases, 8789 deaths. In our Civil War, more than 80,000 cases. In the Spanish-American War, 20,730 cases, 1580 deaths in

an army of 120,000 men. In the camp at Jacksonville, Florida, in 1898, in a brigade of approximately 18,000 men, there were 2693 cases, with 248 deaths.

At the opening of the Spanish-American War, Surgeon-General Sternberg issued Circular No. 1 (date April 25, 1898), outlining very clearly the sanitary responsibilities of the military authorities. In this report he was particular to call attention to the probable role of the common house-fly as a means of conveying typhoid fever and other infections. Had the recommendations of General Sternberg been carried out, we should subsequently have had little infection among our troops. Unfortunately, however, the Medical Corps of the U. S. Army at that time was not sufficient for even our small standing army of 25,000 men, and when it was suddenly expanded into an army of 250,000 the Medical Department, along with others, was swamped and unable to cope with the situation.

On August 17, 1898, General Sternberg secured the appointment of the Typhoid Fever Commission, consisting of Major Walter Read, M. C. U. S. A., and Majors Victor C. Vaughan and Edward O. Shakespeare, surgeons U. S. V. This Board presented a comprehensive and elaborate report on the subject of typhoid fever, on methods of infection, means of control, and gave many other details which have placed their work among the medical classics.

In view of this appalling morbidity and mortality rate from typhoid fever among our troops, one can readily understand how interested the Medical Department was in the announcement that Sir A. A. Wright, an English army officer, had devised a method of vaccination whereby human beings may be protected from typhoid infection. He announced his discovery in 1896, but because of errors in technic and lack of interest on the part of military authorities little was accomplished until 1904, when Sir W. B. Leishman, of the Royal Army Medical Corps, reintroduced the method with some success.

In 1908, Major F. F. Russell, Army Medical School, Washington, D. C., began the production of antityphoid prophylactic vaccine, and during 1908 and 1909 there were vaccinated 1887 persons who volunteered for the purpose. In 1910, the number of volunteers inoculated reached 16,073.

The sudden establishment of the Maneuver Division along the Mexican border in the spring of 1911 brought together approximately a full brigade of 20,000 men. With the his-

tory of the Spanish-American War in mind, Surgeon-General Torney and his staff realized the probability of extensive infection among the men, and they were prompt to introduce such sanitary measures as would keep the infections at a minimum.

One of the first measures was the issuance by the Secretary of War (who himself had submitted to this protective inoculation) of a general order making vaccination against typhoid fever compulsory for every man in the brigade under the age of 45. As a consequence, within a very few weeks the entire brigade received this protective inoculation; and the results were startling, indeed, as many of us remember.

Whereas, in 1898 at Jacksonville we had

and with little or no discomfort to individuals receiving this vaccination, the greatest credit and honor are due. Should we be so unfortunate as to find it necessary to engage in an active campaign, both the military and medical authorities now will be relieved of one of the most tremendous anxieties they have had to contend with in the past.

It is to be hoped that the civil population may be educated as to the advantage of this procedure, and thus the appalling loss both of lives and money each year be wiped out.

The Panama Canal

With the tremendous engineering feat presented in the construction of the isthmian canal we are more or less familiar, but many

TYPHOID FEVER AMONG ENLISTED AMERICAN TROOPS, UNITED STATES ARMY

	Year	Mean Strength	Absolute Cases	Number of Deaths	To each 1000 soldiers of the command, the rates are:	
					For Cases	For Deaths
Prior to use of typhoid prophylactic	1901	26,515	250	17	9.43	.64
	1902	39,736	341	34	8.58	.86
	1903	42,264	246	12	5.82	.28
	1904	43,940	247	12	5.62	.27
	1905	42,834	153	13	3.57	.30
	1906	40,621	230	12	5.66	.28
	1907	35,132	124	7	3.53	.19
	1908	46,316	136	11	2.94	.23
	1909	57,124	173	16	3.03	.28
Under typhoid prophylactic	1910	55,680	129	9	2.32	.16
	1911	55,240	44	6	0.80	.11
	1912	58,119	15	2	0.26	.03

had 2693 cases and no 248 deaths among 18,000 men, we had, in 1911, among approximately 20,000 men living under practically the same conditions and in the same character of territory, only 2 cases of typhoid fever and no deaths; one of these victims being a civilian who had not been vaccinated.

In San Antonio, at this same time, there were 49 cases of typhoid fever, with 19 deaths among the civil population. As our troops were allowed much liberty, many of them almost lived in the city of San Antonio. What would have been the result without this protective inoculation? The history at Jacksonville, in 1898, tells us.

The introduction of this one measure, alone, by Surgeon-General Torney will redound to his credit as long as we have an army, and will live through ages of medical history. And to his efficient assistant, Major F. F. Russell, who has been personally responsible for the production of this typhoid prophylactic, has watched every step of the procedure, and in whose hands it has been carried to a point beyond dispute without a single fatality

do not realize that—in spite of the superb technical skill of Colonel Goethals, of the Engineer Corps of the U. S. Army, supported by a very capable army of associates, who is directly responsible for this work—it would have been impossible to complete this vast undertaking, were it not for the work of the Medical Department of the U. S. Army under the efficient direction of Colonel Gorgas and his able associates.

Froude, after visiting the Isthmus in 1885-6, wrote as follows: "In all the world there is not, perhaps, now concentrated in any single spot so much swindling and villainy, so much foul disease, such a hideous dung-heap of moral and physical abomination as in the scene of this far-famed undertaking of nineteenth-century engineering. . . . The scene of operations is a damp tropical jungle, intensely hot; swarming with mosquitoes, snakes, alligators, scorpions, and centipedes; the home, even as nature made it, of yellow-fever, typhus, and dysentery, and now made immeasurably more deadly by the multitudes of people who crowd thither."

When this canal was first talked of, Surgeon-General Sternberg, with his commendable foresight and knowledge, called attention to the fact that its physical completion was impossible under the sanitary conditions existing at that time. The French, who spent so many years of work on the Isthmus, with their capable engineers and the vast equipments in the way of machinery and money, were unable to do any considerable labor under the conditions then existing. I question whether it will ever be known how many thousands of laborers and highly trained men were buried during the period of their operations on the Isthmus; Colonel Gorgas estimates the number at 22,000.

Yellow-fever, malaria, and all of the other infectious diseases seem to be centered in this natural pest-spot of the world. Immediately upon assuming charge Colonel Gorgas began vigorous work on the sanitary problems confronting him. With the knowledge he had gained in Cuba about yellow-fever and the method of its promulgation, he had a large strip along the line of the canal thoroughly cleared up across the country. Mud-holes were filled, vegetation was removed, water supplies were examined and passed upon, houses were screened, so also cesspools and cisterns, in order to keep mosquitoes from breeding, and where possible modern sewage-systems were placed in operation. Thus, with the thousand and one other details which this efficient man and his associates introduced, the work has been pushed toward completion and in all probability will be finished in advance of the time set.

As I stated before, the Canal Zone has been called the plague-spot of the world; but today it is a more healthful place in which to reside than are many of the smaller communities and cities of the United States.

Not to burden you unnecessarily with statistics, those three dreaded diseases, yellow-fever, smallpox, and the bubonic plague, have practically disappeared from the Isthmus; only one case of yellow-fever occurred in 1905 and one in 1910. There was a death from smallpox in 1907, one plague-case in 1905 and another in 1911. This is a record that is not equalled by any country in the world. The United States of America has just cause for pride.

Beriberi and Uncinariasis

One topic that caused considerable anxiety in the Philippines was the prevalence of a peripheral neuritis known as beriberi. This condition was one of the most perplexing ones

which the Japanese army had to meet in the Russo-Japanese War; it was found to be very prevalent in the Philippines, and was especially annoying there.

Chamberlin, with a board of officers, attacked this problem. It was found that undoubtedly beriberi was caused by eating polished rice, which is the staple article of diet in those regions, certain substances being removed in polishing which seemed to be necessary for the perfect nutrition of the individual. By simply substituting unpolished rice for the polished article and forbidding the sale of the former in the Philippine Islands, this disease practically has been stamped out.

We now come forward but a few years, and we find Major Bailey K. Ashford and the military officers in Porto Rico confronted with the malady known as tropical, or Porto Rican, anemia. One can hardly realize the deplorable condition of the poor people thus afflicted. These victims had been accused of being lazy and slothful, when, in fact, the physical conditions under which they labored caused such marked depression and weakness that they were positively unable to perform work. Not only were they unable to exert themselves, but the death rate from this condition was appalling.

Following up his investigations with especial care, Major Ashford determined that the cause of this pernicious form of anemia was a parasite known as the hookworm (*uncinaria americana*). This hookworm is an inhabitant of the human intestines, and it is scattered over the ground of these unsanitary countries by the bowel discharges of those infested with the parasite.

The habit of the natives of going barefoot exposed their feet and ankles to infection from this source. The hookworm being present in the island of Porto Rico, one can readily see that it was an easy matter for this parasite to gain entrance into the system through abrasions, cuts or any lesion on the feet and legs. Entering the blood stream, the parasite is carried along the general vascular system and after a time reaches the lungs, where it passes out into the air-chambers. Then it works upward through the trachea to the mouth, when, upon reaching the mouth, it is unconsciously swallowed by the host and thus gains entrance to the alimentary tract. Here it proceeds with its further development and, sapping the vitality of the victim, gives rise to the phenomena of what is called hookworm-disease—a malady that has become an economic tragedy.

Once the cause of this malady was known, it was comparatively a simple matter to institute proper remedial and preventive treatment. Hospitals and camps were established all over the island, and in a short time a large portion of the population of Porto Rico was under treatment. The result has been that these poor, so-called lazy natives have been relieved of their infirmities and the entire island is awakening and becoming of considerable economic importance.

Many other important and extensive observations are under way, notably that of Captain Seiler in association with officers of the Public Health Service in the investigation of that serious problem which we have to confront in our own southern states, namely, pellagra, a disease unknown here some five or six years ago. In that time, however, there have become known some 30,000 cases, with a mortality in excess of 35 percent. Although a large amount of work has been done in connection with this serious disease, its causative factor is as yet unknown, nor have we any specific treatment for it.

How the Practitioner Is Concerned

It will readily be appreciated that in this brief survey I have been able to mention only the most prominent features connected with the work of the Army Medical Department.

The earnest endeavor, the conscientious and heroic work which has been and is being carried out by the officers of the Medical Department of the United States Army not only has a bearing upon the general health of the Regular Army and the community at large, but it may become very personal to many of us. The mobilization of the maneuver division on the Texas border, in 1911, was very close to the point where volunteer troops would be called into the field. Fortunately the crisis passed without this grave fear becoming a reality.

As you are aware, at the present moment we have a division of troops encamped along the Mexican border. It is believed, and generally hoped, that no further increase of our army may be necessary in connection with the unsettled conditions now existing in Mexico. But, in the event of such a calamity as war ensuing, undoubtedly some of us, or our sons, our relatives, would respond to the call to the colors.

A man of proper motives is quite ready and willing to take his share of the risk in his country's cause, nevertheless no man wishes to be left upon the battle-field unattended, perhaps for days, in the event of his being wounded in action; nor in case of illness does he want to be without shelter and proper nursing.

There is a tendency in the minds of some of our legislators to curtail the size of our permanent army establishment and to interfere seriously with the proper development of several of the departments. This has been felt very strongly by the Medical Department in the past. Even with the vast strides which have been made, we are still far from being properly supplied with hospitals, ambulances, and trained personnel.

As a nation, we Americans are prone to postpone grappling with any difficulty until we are actually face to face with it. There are many things that must be anticipated, and the preparation of the medical department of the army requires constant and energetic work upon the part of the officers connected with it. We, as voters, can influence the action of our representatives in Washington in a perfectly proper manner, to uphold and support the medical department in its endeavors to be prepared for any emergency, and I hope that my words here may interest others to take active steps to help in this very desirable and much-needed work.

The American people will never stand for a repetition of the appalling sick and mortality rate of the Spanish-American War. They will hold to strict accountability those who, for any reason whatsoever, may be the cause of such conditions.

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Interesting Cases Occurring in the Practice of a Country Physician

By JAMES L. NEAVE, M. D., Dresden, Ohio

EVERY physician in active practice will, in the course of years, meet with odd and interesting experiences, and I suppose I have had my share. Reading the experiences of others has caused me to turn over the tablets of my memory, and I find that I have had my share, some of which may be of interest to others.

The first instance of this kind to come to mind is that of an odd case of imperforate nipple. The woman was a primipara. Everything seemed to be normal after delivery, but the mother began to complain that one of her breasts was enlarged and hard. Remedies employed to remove this condition were without effect; the breast-pump failed to draw a single drop of milk; all other efforts for relief were without avail. Finally the breast was lanced several times and there was eventual recovery. When the next child came, particular attention was given to this breast, with a view to preventing formation of milk. The child was allowed the use of the other breast, but the milk seemed to lack the elements of nourishment, for the child wasted away until it was taken from the breast and fed artificially. In subsequent confinements both breasts were at once "dried up" and the babies were brought up on the bottle. If there were tubes in the nipples of the breast in question, there certainly were no openings for the escape of milk.

Not long ago I officiated at the most sudden birth in all my experience. Symptoms gave evidence of a larger amount of liquor amnii than usual. Pains were strong, but the os dilated slowly. At last I deemed it advisable to rupture the membranes and did so. The escape of water was the largest I ever have witnessed. It came with a rush, pouring clear up to my elbow, and making a sound almost as if a barrel was being emptied. I removed my hand for only an instant, replacing it immediately. Contrary to established rule, there was not a moment of delay in the descent of the head, and during the moment that my hand was away the head was completely expelled through the vulvar opening. Later I found a medium-sized tear of the soft parts, but nothing serious.

Another odd case recurs to memory. The parturient woman was large, coarse,

animal in nature. I found her in a log house, with the room bare of conveniences and no carpet on the floor. She was walking around the room, saying that she never laid down during confinement, as the pains always stopped if she did. The floor was a sight—wet all over with the escaping water. Three times I induced her to lie down, but, sure enough, the pains stopped each time almost immediately. The only way I could think of to finish the delivery was, to employ in a modified way the method I had learned from my Indian experience.

I got the woman out of bed and onto her feet—had her squat down in the corner of the room with her back to the wall, and then, myself squatting in front of her, I delivered the child onto the floor. After placing her on the bed, I attended to the removal of the child from the cord. Labor-pains now again ceased entirely, so that, in order to remove the afterbirth, I once more had to go through the same performance—placing her in the same position on the floor and then completing the operation. The woman made an uneventful recovery, as women of her class generally do. Incidentally I may remark that this case is one of my crown jewels, I feel, for I never received pay for my services, laborious as they were.

One of the worst hysterical cases I ever saw occurred in my practice on the frontier. Life at an Indian agency, especially for the women folks, was not always one "glad, sweet song." Everybody was more or less under a nervous strain, the peculiar surroundings making this condition almost inevitable. If a woman naturally of a nervous disposition had, under the additional stress of being sick, a nervous breakdown, it was not much shame to her; but the case was all the more difficult to handle. In this instance it was an eastern woman of refinement, nearly two thousand miles from home and just recovering from a physical break-down. She became listless, morose, dejected, finally refusing medicine or nourishment of any kind. She grew pale and bloodless in appearance—simply lay still and took notice of nothing. There was no organic trouble of any kind—simply a case of dying from inertia; for death was very near.

Finally I told her husband that she would die unless she was shocked into action. As a last resort, in order to save her life, I recommended the free use of a switch well laid on, telling him that medication was absolutely useless. He received my advice in amazement and asked if I was serious. When I told him that I was in earnest, in so far as insisting upon the adoption of some radical measure, he requested me to remain away for a day and he would do the best he could—but said he could not follow my advice exactly. One day passed, but the day following I was called in. I found my patient propped up in bed, with a light wrap around her shoulders, color in her lips, skin looking more life-like, eyes snapping with resentment. Also she was able to talk and she acted as though she would like to say several kinds of things to me in a way I probably would understand.

The husband later explained to me that he had considered my advice, had spoken his first harsh word to his wife, and had done the hardest duty of his life. After thinking the matter over carefully, he had adopted the following plan: He went to the kitchen and prepared the table for two. Then coming into the bedroom, he ordered his wife to get up and come to the table. Of course, she paid not the slightest attention. He then wrapped her up carefully, jerked her up, carried her out into the kitchen and slammed her down into a chair roughly. Then taking a chair opposite her, he gruffly told her that if she wouldn't eat she might sit there and watch him eat; and throughout the meal he continued to make unkind remarks to her. The woman was completely astonished out of herself—her color began to rise, her eyes began to snap, and before the meal was over her tongue loosened up and she said things in plenty. When the husband was through eating an utterly savorless breakfast—as he told me—that nearly choked him, he gathered her up roughly, put her back into bed in any way but gently, and then, after gruffly telling her that she could expect a repetition of the same treatment at the next meal, stalked out of the room. When he was by himself, he broke down and wept.

The treatment, however, was successful. The woman was aroused out of her depression—her temper was stirred and she came back to own herself. When the time for the next meal came around, she asked to be carried to the table and ate with appetite. Recovery of strength was rapid and she was soon around attending to her usual duties. And

to the day of her death, many years later, she always had a warm friendship for the doctor who suggested the rough awakening.

One of the strangest cases that ever came under my notice—of relief of certain surgical conditions by strange methods—came through the medium of a railroad accident. The patient was a heavy-set man. The car in which he sat had, by an accident, been torn off its trucks and then been put back, whereupon it was started for the shops, running at good speed. Taking a curve, the injured car was again thrown from its trucks, turned a somersault and landed at the bottom of a high embankment, the wheels keeping to the track. My patient somehow was thrown out of the car through the door and alighted violently in a sitting posture on the ballast forming the embankment. This ballast looked like iron slag, whence some idea can be conceived of the force of the blow. No bones were broken, but there were bruises and severe muscle wrenching of the legs. The principal injury was a severe concussion of the brain.

The patient lingered for several weeks, with concomitant aberration of the mind. As the bodily shakeup improved, the difficulty in handling the condition increased, the patient showing a restless desire to get up—but with the mental faculties simply developing a high degree of cunning. The outlook seemed serious, indeed. One night the nurse carelessly dozed off without giving much attention to the condition of the patient, when she was suddenly awakened by a crash and found the patient sitting on the floor. He had attempted to get out of bed, had sat on the edge of the bed, slipped off and sat down on the floor with his full weight, fairly jarring the room.

The patient was wild and excited and began talking rapidly. He was impressed with the idea that a woman had come into his store to sell a basket of eggs, which, being a wholesale merchant, he did not wish to be bothered with. The dream-woman insisted—he became irritated, took the basket from her with a jerk and started rapidly toward the rear of the store. In his irritation he did not attend to his footing, slipped and fell. That, he said, was the noise we had heard, and he called our attention to the unbroken eggs scattered all over the floor. The hallucination was very real to him, his eyes glittered with irritation and his tongue ran on unceasingly.

Soon the wonderful occurred. Slowly the man quieted down, a dazed intelligence came

into his eyes, the mind swung toward its normal balance, and the next morning found him rational. Recovery was rapid—and now, several years later—there seems little more than the nervous recollection of the accident remaining. He has a nervous dread of a railroad ride and avoids it as often as possible. The concussion seemed to have been cured by a second concussion or shock of the same character. The treatment may be good homeopathy, but I cannot recommend it.

A case of sarcoma occurring recently in my practice has been of intense interest to me. The patient was a young woman, and the growth was in the right shoulder-joint, involving the head of the humerus. The verdict was, amputation at the shoulder-joint; but the surgeon directly in charge determined on another course. He cut down over the deltoid muscle along the line of the humerus, dislocated the head of the humerus and tipped it out. The socket was carefully examined, and it seemed to be clear of infection. The shaft of the humerus midway between the shoulder and elbow appearing perfectly healthy, the bone was sawed at this point, removing entirely the upper half of the humerus; then the wound was closed. Healing was perfect, without formation of pus.

There never has been any reappearance of the disease; and today the casual observer would not notice anything unusual when meeting the young woman, except that, when she has occasion to shake hands, she extends the left hand. She has almost perfect use of the forearm and hand, does almost anything that anybody can, but of course cannot use the arm itself where the shoulder-joint action is needed. She has married since then and has one child, which she handles without difficulty, although many of her actions are queer and awkward. She is in vigorous, good health and the surgeon's experiment has proven to be a glittering success.

My latest remarkable case is also a shoulder case. It is the only one of its kind I ever saw or heard tell of, and the surgeon in charge also acknowledged that it was entirely new to him—in a hospital practice covering years, he had never seen its like. The only name I can give it is necrosis of the skin.

The patient was a man past middle age. Working in a sand-pit, he knocked a line of skin about one and one-half inches long off the back of his right hand. He thought nothing of the injury, and, after covering the abrasion with a piece of newspaper tied on

with an old handkerchief, he continued with his work. Two days later the hand became swollen and painful, and he quit working. The swelling very shortly involved the arm up to the shoulder. At several points—the back of the hand, over the inner side of the elbow, and along the inner side of the arm—the skin assumed the appearance of having been scalded. Next, the skin and connective tissue came away in shreds and strips. The muscles were bared and the connective tissue between the muscles came away. The biceps muscle in particular was laid bare and the brachial artery was exposed and could be seen beating deep down along the border. The skin on the inner forearm sloughed away, exposing the muscles. It became evident that the process had no intention of stopping, as pus began to show, burrowing in the region of the axilla.

As a last desperate effort to save the life of the patient, the arm was amputated at the shoulder-joint, and it was difficult to obtain sufficient healthy skin to form a flap, even after the parts were flattened by removing the head of the humerus. Almost immediately after the operation the patient showed relief from the debilitating drain of the diseased arm and slowly rallied. The wound healed largely by granulation, the stitches holding poorly, and there was considerable pus formation. This, however, was not in the least surprising when the character of the condition is taken into consideration. The man eventually made a good recovery and today is walking the streets of his home town.

While on the subject of surgical cases, I am reminded of one that occurred in my younger days and which made a profound impression upon me.

The physician with whom I was at that time associated, received an emergency call and found his patient to be a man with his forehead crushed in. The man was engaged in a wheel factory, his work being turning hubs. The chisel used in this work was held supported against the rapidly turning hub, which of course, turned towards the workman. The chisel struck a knot, the hub split, and a section was driven against his forehead with crushing force.

The verdict of both the doctors called in was, that the man would inevitably die. He was unconscious and breathing heavily. A triangular piece of frontal bone over the left eye was broken loose, involving the entire orbital ridge on that side, and extending upward about two inches, to a point. Two cuts over this place were made into one, by

the use of a bistoury, and the fragment picked out. A larger triangular piece of frontal bone over the right eye was also broken loose. This fragment included the orbital plate and the entire orbital ridge on that side, and pressure on the apex of the broken bone pushed the eyeball forward and outward.

The older doctor suggested removal. My advice was to stitch up the cuts and let the piece of bone remain, for the cosmetic effect on the head of the corpse. For, I argued, the man is bound to die in a very short time, and he will look horrible with his forehead all caved in by having the greater part of the frontal bone all removed. So, the parts were stitched up—we retaining the removed fragment.

Examination of the hard palate revealed the fact that it was crushed into a number of pieces. We told the wife that it was merely a matter of a short time when her husband would die, that there was absolutely nothing we could do, and left.

Some four or five days later, a wild-eyed woman rushed into our office, with the excited inquiry as to what she should do for her husband. Inquiry revealed the fact that she was the supposed widow. She had left her husband sitting up in bed, shaving himself,

and she was afraid that the effort would kill him. Evidently she need not have been worried—it was proven incontestably that it would take more than that to kill him!

The man made a complete recovery so far as his general health was concerned! The cut made by the doctor healed by first intention, leaving not a mark. Where the bone had been removed, there was, of course, a depression, but outside of this the only thing noticeable was, that the man's entire mentality was changed. He went back to work at the factory, but was sullen and morose and had an ungovernable, unreasoning temper, entirely different from his former self, so that if crossed the slightest by any of his fellow workmen he would viciously throw at the party incurring his ill will anything he happened to have in his hand, so that the workmen were forced to let him strictly alone. From being quiet and peaceable, he became really a dangerous man.

These few cases have been written up with the hope that they would so meet with the approval of my professional brethren that they would keep the ball a-rolling and favor us with a recital of some of the interesting happenings that fall to the lot of all active practitioners.

Spring is Coming—Perhaps

By R. H. ROBERTS

*When the tender little snowdrops are unfolding to the view,
And the hedgerows and the woods are turning green,
While the annual demand note for the Income Tax turns blue,
And the paper-hanger enters on the scene,
Spring is coming!*

*When you go out in the morning, and the sun above is bright,
You joyfully discard your coat and gamp,
And get the influenza, and rheumatics, and the blight,
Returning in the evening cold and damp,
Spring is coming!*

*When the furniture is standing in the garden on its head,
And the carpet has departed from the floor,
When you have the utmost trouble every night to find your bed,
And fall against the newly varnished door,
Spring is coming!*

*When a lady to her husband says: "The sales are on in town,
You like me to look pretty, don't you, Jack?
I want a ducky costume and a fascinating gown,
For I haven't got a garment to my back,"
Spring is coming!*

THE THERAPEUTIC NOTES

LARGE DOSAGE OF ATROPINE FOR EPILEPSY

Dr. Dorner (cf. *Therapeutische Monatshefte*, 1912, May) argued that the degree of the disturbance in cardiac function is of importance for the course of epilepsy. Accordingly he attempted, in eleven cases of severe epilepsy, to increase the cardiac action and to regulate intestinal function by subcutaneous doses of 3 milligrams each of atropine sulphate, these sometimes being repeated at intervals of eight hours. In some instances the epileptic attacks were aborted; in others, they were clearly influenced beneficially. In spite of the enormous doses of atropine, no toxic effects were noted.

CALCIUM SALTS IN SKELETAL DISEASES

Jacoby and Schroth report upon the action of calcium lactate in a case of fibrous osteitis (cf. *Therapie der Gegenwart*, 1912, Dec.). The diagnosis of cystic fibrous osteitis had been made clinically and by the x-ray. There existed a fracture of the right humerus. No improvement having occurred after the administration of potassium iodide for a period of six weeks, and inasmuch as the fracture had not yet united, the patient was given calcium lactate; and this was followed by complete union in the course of four weeks.

In addition, the other affected portions of the bones improved remarkably. In one tibia a cyst had existed which under the influence of the calcium medication was changed into bony tissue. Examination of the metabolism in this patient had shown that the calcium-content of the urine was enormous and that thus the organism was being impoverished in calcium. This excessive loss was remedied by the administration of calcium lactate, and calcium retention occurred, the excessive elimination being arrested.

Calcium lactate (or, still better, calcium lactophosphate.—ED.) has proved to be of great value in many instances in which a reconstructant, particularly of the bony tissue, was required. The remedy is sure to

prove of benefit in cases of fracture in all patients whose general nutrition is below par, also in rickets, osteomyelitis, and similar maladies.

EDEMA CAUSED BY EXCESS OF SALT IN DIET

A. Stevenson reports a case of a young married woman (*British Medical Journal*, Dec. 28, 1912) suffering from general edema for which no cause could be found except the excessive eating of salt. When the salt ingested was limited, the edema rapidly disappeared.

PNEUMOCOCCUS INFECTIONS

Sir Almroth Wright discusses, in *The Lancet* for December 14, 1913, the pharmacotherapy of pneumococcus infections. An agent directly destructive to the coccus should be bacteriotropic, and monotropic toward this particular coccus, acting against it, and against no other. Such an agent should be sought in the human organism, which contains "a laboratory which can, within certain limits, furnish bacteriotropic substances which will enter into destructive chemical combinations with any and every variety of bacterial protoplasm."

We can also conceive of drugs that might accomplish the same purpose. The term chemotherapy should include pharmacotherapy, and also immunotherapy, since the attack made in the latter upon the microbes is a chemical one. The pharmacotherapy of Ehrlich differs radically from the use of anti-septics, since nobody expects the latter to act monotropically. It is clearly indefensible to administer a drug for which we have no *a priori* grounds or evidence showing that it does what is intended.

He takes up Morgenroth's suggestion of ethylhydrocuprein hydrochloride for pneumonia, and finds that, while lysol, creosote, and guaiacol do not exert in serum nearly the germicidal powers they display in watery solution, Morgenroth's remedy kills the pneumococcus in 400,000 parts of serum and inhibits its growth in 800,000 parts; these

values being about the same as those of its watery solutions. This agent also exerts its germicidal action specifically on the pneumococcus. Morgenroth's experiments on mice showed that ethylhydrocuprein prevents the development of inoculated pneumonia in 90 percent of cases and cures it in 50 percent.

DOSAGE OF DIPHTHERIA ANTITOXIN

In a review of recent researches in serum therapy (*Therapie der Gegenwart*, 1912, October), F. Rolly shows that, in spite of many unfavorable reports and opinions that have been expressed, the curative value of diphtheria antitoxin can not be denied, and that the comparatively high doses which are administered in France and in this country, as compared with those customary in Germany, are not only not harmful but rather beneficial. Prof. Rolly concludes that at least 1500 units [European units, not American units, which are smaller.—Ed.] should be injected in mild cases of diphtheria, and at least 3000 units in severe ones. The injections should be given as early as possible and made intramuscularly. If benefit does not become manifest promptly or if new symptoms of disease occur, the injection should be repeated.

ARNICA DERMATITIS

Arnica has long been employed in the household as a favorite remedy for all sorts of superficial injuries, while enjoying a reputation of being not in the least harmful, and exerting a soothing and beneficial action in all contusions and even in the case of fresh wounds.

In spite of this popular idea, the drug has been expunged from the British Pharmacopoeia as an uncertain and often even dangerous remedy, while Whitla, in his "Materia Medica" (6th edition), says that external applications of preparations of arnica cause irritation of the skin that may take on serious or even inflammatory action, and extending to distant parts.

In *The British Medical Journal* for December 21, 1912, F. R. Proctor-Sims reports the case of a young married woman who had received some bruises falling downstairs and who had made application of the tincture of arnica. When seen by the physician, her lumbar and sacral regions were covered with a red, angry and extremely irritable erythematous rash. One side of her face was puffed, and there was a rash there in appearance

very like urticaria. There was a similar rash on one forearm. Strangely enough, none of the arnica had been applied to the latter two locations. The rash and irritation subsided in a few days under the combined treatment with saline purges and a sedative salve.

CRUDE COAL-TAR FOR SKIN AFFECTIONS

According to *The American Practitioner*, Mueller (*Deut. Med. Woch.*, 1912, June 6) reports his experience in the Breslau skin clinic with crude coal-tar. The tar was painted in a thin layer on various sorts of lesions, allowed to dry, then covered with a muslin bandage. When well borne, the application was repeated in twenty-four hours, and again two or three days later, according to indications. Removal of the tar, when desired, was effected by means of dressings of zinc paste or ichthyol-zinc paste.

VERONAL AND PHENACETIN

Von Noorden (in *Therapie der Gegenwart*) states that he has found the combination of veronal, 5 grains, and phenacetin, 2 1-2 grains, an exceptionally useful combination for insomnia. The addition of the phenacetin to the veronal not only doubles the hypnotic effect of the veronal, but it prevents unpleasant after-effects from the drug, such as headache, tired feeling or confusion on the following day. This combination, with codeine phosphate, 1-2 grain, added, he found valuable where the sleeplessness was due to an irritating cough.

PROPHYLAXIS OF TETANUS BY MEANS OF SERUM

From a detailed study of the literature on the subject, F. Rolly (*Therapie der Gegenwart*, 1912, October) concludes that tetanus may probably be prevented by prophylactic injections in the neighborhood of the suspected wound and elsewhere of antitoxin, 100 units. In some instances in which tetanus appeared in spite of such injections, the disease took a mild course.

Dr. Rolly calls attention to the fact that, after prophylactic serum injections, anaphylactic symptoms may occur, especially if the injections are given at intervals of more than eight days. In such instances, serum derived from animals other than horses should be used or else a condition of antianaphylaxis should be produced artificially.

It is also well to dress suspected wounds prophylactically with liquid serum. The same end is obtained by a tetanus-antitoxin ointment that has been prepared by Bockenheim.

ADRENALIN IN WHOOPING-COUGH

In *The British Medical Journal* for December 28, 1912, G. V. Fletcher reports favorable results from the administration of adrenalin in whooping-cough. He was led to employ this after successfully treating some patients afflicted with asthma with hypodermic injections of a 1 : 1000 adrenalin solution. As he did not think it wise to attempt hypodermic medication in children, he gave the remedy by mouth, the dose varying from 1 to 3 minims, taken in water, according to the age of the patient. The first dose in infants under six months of age was 1-2 minim, which was found to be too small. The largest dose given was 3 minims, in the case of a patient seven years old. The frequency of the administration varied according to the frequency and severity of the paroxysms—every three hours in the more severe ones and every four hours in the less acute.

In practically every one of 40 cases there was a decided benefit, although not in all was the result curative. Under adrenalin treatment, the author found that only exceptionally an attack of whooping-cough lasted longer than three weeks. No other form of treatment was administered, except that the patients were allowed out whenever the weather permitted.

INFLUENCE OF MILK IN INFANTILE CONVULSIONS

In an interesting paper on a milkless diet in spasmophilia, W. Raabe (*Therapeutische Monatshefte*, 1912, May) mentions the well-known fact that spasmophilia is related in considerable degree to the mode of nutrition, and that Finkelstein has pointed out the great importance, in this relation, of cow's milk. The relative immunity of breast-fed children from spasmophilia may be explained by their usual freedom from chronic digestive disturbances; but the fact must not be lost sight of that this breast-feeding does not afford an absolute protection against spasmophilia, since even in breast-fed infants the calcium-index, which today is generally acknowledged to stand in direct relation to spasmophilia, may become unfavorable. Indeed, among 27

children affected with spasmophilia in a certain physician's private practice, three, or a little more than 11 percent, had been breast-fed.

As already mentioned, clinical investigations have shown that cow's milk is an important etiologic factor in the production of spasmophilia, and that this is almost entirely antagonized by breast-milk and by milkless diet. In this respect the action of cow's milk must be compared to a poisonous action and is partly dependent upon its sodium-content, while it is counteracted by calcium.

It follows that a diet is best if it contains cow's milk in only such an amount as is absolutely necessary for the permanent development of the infant. Moreover, a still better diet would be one in which cow's milk could be eliminated altogether, that is, first of all breast-milk with or without some albuminous food, such as has been suggested by Finkelstein in the case of older children and for younger infants who do not receive enough nourishment from the breast. The albuminous diet employed by Finkelstein is applicable in children from the ninth month on.

In the smaller children the nervous irritability which constitutes spasmophilia and which depends upon an unfavorable calcium-index was remedied by the substitution, to a greater or lesser degree, of broth, buttermilk, codliver oil, grits, etc., for milk, and by the administration of calcium acetate in 5 percent solution, together with aromatic spirit of ammonia.

UROTROPIN AS A GENERAL SYSTEMIC GERMICIDE

Emil Zak (cf. *Therapeutische Monatshefte*, 1912, April, p. 270) discovered accidentally that hexamethylenetetramine (urotropin) is eliminated with the sputum not only through the bronchi but also through the salivary glands; and it occurred to him to administer the remedy for the purpose of lung disinfection, principally in ulcerous processes of tuberculous gangrene and bronchiectasis.

In addition to these uses, others are suggested by the fact that urotropin very probably is eliminated through the secretions of the eye and that it has been found in the bile. It has also been shown to prevent fermentation in the gastric contents, so that its scope of usefulness appears to be very wide, and the author encourages clinical trials of the remedy in these conditions. The drug is well born in doses of from 2 to 4 Grams.

GLEANINGS from FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M. D.

Antitoxin and Antitoxin Therapy

(Concluded.)

THE detoxication of toxins by antitoxin, accomplished by the forming of a non-poisonous combination from both, and this is shown by the fact that in certain cases we can succeed in separating again the poison from the detoxicated toxin—the antitoxin combination. Thus Roux and Calmette were able to make poisonous again the harmless mixture of snake poison and antitoxin by boiling, because the antitoxin in this case is readily destroyed by boiling heat, while the snake poison can better withstand a high temperature. (Roux and Calmette, *Ann. de L'Institut Pasteur*, 1895, page 225.)

Again, Morgenroth succeeded in separating by acids the poison of diphtheria from its combination with antitoxin. (Morgenroth, in *Virchow's Archiv*, 1907, Bd. 190.) Lastly, in certain individual cases, both toxin and free antitoxin will diffuse through certain membranes, while the mixture of both will not. (Martin and Cherry, "Proc. of the Royal Soc.," 1898, and *British Medical Journal*, 1898.)

The manner of how antitoxins originate is obscure. Their specific nature suggested the thought that they arise from the toxins, i. e., that the organism is able to convert toxins into antitoxins, which later could then make innocuous any new supply of poison. (Buchner, *Muench. Med. Woch.*, 1893, p. 449.) But then there would have to have been quantitative relations between the amount of the incorporated toxins and the antibodies originated from them. But Knorr has shown that, when, for example, a certain amount of tetanus toxin had been injected into the organism, it then is able to produce so much antitoxin that 100,000 times the amount of toxin injected could be neutralized by it. (Knorr, *Fortschritte der Medizin*, 1897. Bd. 15, and "Habilitationsschrift," Marburg, 1895.) Furthermore, Roux and Vaillard have been able to remove, by repeated vene-

sections, the entire blood of horses which were immunized against tetanus, without essentially diminishing the antitoxic power of the serum of these animals.

Also, of other antibodies related to the antitoxins (e. g., the agglutinins from the serum of persons who recovered from abdominal typhus, and which are so valuable diagnostically), we know that they are demonstrable in those persons for months and years, although we know from the fate of the ready-formed agglutinins introduced from without that they vanish gradually either by internal destruction or through the excretions.

In active immunization these anti-bodies must be reproduced repeatedly. Consequently, there arises the disproportion between the number of antitoxins and the resulting releasing toxins, and the continual production of the antitoxins without further supply of toxins, all of which makes it very probable that the antitoxins are the product of cell metabolism.

The antitoxins are, therefore, regarded as the products of (professedly as yet perfectly unexplained) specifically reacting processes which neutralize the toxins in the cells. When these reactions have once resulted, then they can keep up the work of inciting for a long time. Similar as in other effects of irritation, there is no need of the existence of a definite proportion between the induced amount of the toxins and the production of the resulting reaction.

As to the locality where the antitoxins are formed, we, also, are very insufficiently informed. The blood is considered as the place of their accumulation, but not of their generation. Among the organs, it is only those of the lymphoid tissues that already contain protective bodies at the start of the immunization process before it can as yet be demonstrated in the serum. (Pfeifer and Marx, *Zeitschr. f. Hyg.*, 1898, Bd. 27, p. 272.)

Wassermann, *Berlin. Klin. Woch.*, 1898. s. 209. Roemer, *Arch. f. Ophthalm.*, 1901, Bd. 52, p. 72.)

TREATMENT OF CLIMACTERIC TROUBLES

By these troubles are meant those certain symptoms which are apt to occur in nearly all women during and after the extinguishment of sexual maturity. These troubles are therefore connected with the senile changes that take place in the ovaries.

As long as there are ovarian tissues capable of functioning they fulfil two objects. One is, the maturing and expelling of the ova, and connected with this is the retrograde action of filling up the emptied follicle and forming from it the corpus luteum and albicans. A second function of the ovarian tissue is to provide the general circulation with the so-called ovarian hormones. The latter are products of internal secretion which influence very extensively both the circulation and the metabolism, and the origin of which is thought by some to be in the follicular portion of the ovaries, and by others, in the connective tissue of those organs.

Both of those functions cease to operate when the involution of the ovaries takes place, which manifests itself clinically as a cessation of the menses, and, anatomically, leads to a shrinking of the uterus and ovaries. It is this process which is often accompanied with general and genitofocal disturbances both of which manifest themselves essentially in the vascular system.

Congestions toward the head and cardiac palpitations are prominent symptoms of the general disturbances in the climacteric period. Both of these symptoms may occur when the patient is at rest, but more often when bodily exertions, even of a lighter kind, have taken place, and after psychical excitement, especially if unexpected, has overtaken her. With these symptoms, there also may be a feeling of dizziness, tinnitus aurium, and eruption of perspiration. The nervous system may also become implicated by an increased irritability and even by well-pronounced states of depression, and not rarely, too, merely by increased sexual excitement.

Artificially induced menopauses predispose to stronger and longer enduring climacteric general disturbances, to a certain degree, and this is true the younger the individual is on whom castration was performed. Neuras-thenic persons have considerably more to suffer from climacteric troubles.

The general symptoms described above are not amenable to a therapy of causes. Symptomatic measures will refer first of all to the regulation of the diet. Alcoholics and coffee must be abstained from, and the use of spices and of pepper too, and salt and vinegar must be largely curtailed. Meat is, indeed, not wholly to be proscribed from the diet, but milk, eggs, and vegetables should be given the preference. The stools will become more regulated by this more vegetarian diet, but when needed bowel movements should be promoted by means of enemas and bitter mineral waters; but special cathartics should be strongly advised against. In combating obstinate constipation, moderate daily exercises in the open air such as the lighter sports, or a little garden or field work, will do good service. But much good as these lighter bodily exercises usually do to the entire condition of the climacteric woman, in the same degree all greater exertions will be badly borne by her.

When nervous phenomena become more prominent, then hydrotherapeutic procedures will be in place: a wet-pack of two hours' duration in the evening, or a bath or else a cool rubbing in the morning, followed by an hour or two of rest in the bed. Against an eventual unwelcome sensation of strong sexual desire we may try cold sitz-baths before going to bed at night, also lying on a hard bed if possible, or, when it can be borne, to fight against it with bodily work till exhausted. Also make use of valerian preparations, and small doses of bromine, but give no habituating medication of narcotics.

The trials of a causal therapy of climacteric ills with oophorin and the like must be regarded as a failure, in the main. Still, it may be tried; but when the use of a hundred tablets has brought no satisfactory results, it should be abandoned.

The putting on of much fat that is apt to take place at the menopause can be combated with a reduction of the calories in the food and diligent exercise in the open air. Cures with thyroidin can not be considered as undangerous and demand at least a constant watching over the heart.

Of local symptoms, it is local hemorrhages that have the most interest for the physician. These may come from a big, hard uterus (chronic metropathia) as well as from a small, flabby one. But they can also be the first preadmonition of a developing uterine cancer, and this of course is of the greatest importance; and at this time it is usually cancer of the uterine body.

To exclude from this bleeding, diagnostically, the malignant basis, it is necessary not only to make a bimanual palpation, but an examination of a specimen abrasion is absolutely indispensable. If the microscopic examination shows that there is no carcinoma in the abraded specimen, then much has been accomplished already in many of these climacteric hemorrhages, for curettage is all that is necessary here. But, if hemorrhage does occur again, then we may try fluid extract of *hydrastic canadensis*, 20 to 30 drops three times daily [hydrastinine is above all drugs the remedy of choice in these uterine oozings.—Ed.] or stypticin, 0.05 the same way, or gelatin in the form of puddings.

But it is not rare that simple climacteric uterine hemorrhages become dangerous to life and resort must be had at last to extirpation of the womb. Recently it has seemed that the x-ray treatment of climacteric uterine bleeding may make that operation unnecessary. But before this treatment is undertaken a specimen abrasion must first be had for a microscopic examination, in order to exclude the existence of carcinoma.

Next to the uterine bleeding it is senile colpitis that brings climacteric women to the physician. The patients complain of discharges, and burning and itching about the genitals. There may be also a genuine pruritus vulvæ, in which case we have to look for the existence of diabetes. Meantime we may get good service from ablutions and baths, to which we may profitably add wheat-bran, and also from flushings with purified wood-vinegar, one tablespoonful to a quart of lukewarm water.—*Therapie der Gegenwart*, 1912, page 326.

LIME SALTS FOR ASTHMA

Curt Kayser (*Therapeutische Monatshefte*, 1912, March) says that the treatment of asthma hitherto has practically been limited to the treatment of the paroxysms and that the removal of the underlying causes has not yet been successful, in spite of the many attempts made in various directions.

Concerning the many theories aiming to explain the origin of bronchial asthma, the author says that this disease most probably is a spasm of the bronchial muscles. Another hypothesis worthy of consideration is that which considers asthma as a secretory neurosis, possibly as a kind of urticaria of the bronchial mucous membrane. The author believes that both theories might very well

depend upon similar fundamental changes in the tissues.

In accordance with these theories, we must demand of a treatment that it shall be capable of reducing the irritability of the affected nervous territory and must be able to influence urticarial conditions. Such action may be attributed to the lime salts.

The author studied this action first of all in a case of hay-fever, in which the administration of calcium chloride was followed by excellent results. Thus encouraged, fifteen patients afflicted with bronchial asthma were treated by the internal administration of the calcium salt, with satisfactory results in thirteen, while two were not influenced. In the majority the attacks of asthma diminished after the administration of a 5-percent solution of calcium chloride for three or four days. Sometimes they did not return for several months. The effect became apparent in almost every instance, beginning with the third day of the treatment. The course should extend over a week. The favorite prescription was a solution of 40 Grams of calcium chloride in 800 Grams of sweetened water, given in doses of a tablespoonful every two hours, in milk. The author did not observe any injurious effects from this treatment.

LOCAL USE OF MAGNESIUM SULPHATE

Dr. Harry L. Fifield reported to the Connecticut Homeopathic Society his experiences with local applications of magnesium sulphate, either hot or cold. (Reviewed in *North American Journal of Homeopathy*, August, 1912.) He has seen excellent results follow these applications in orchitis, erysipelas, mastitis, gonorrhea, inflammatory conditions of the female genital organs, boils, carbuncles, besides many other inflammatory conditions.

The solution is prepared by dissolving two pounds of epsom salt in a gallon of hot water. When the mixture has cooled it is filtered through cotton. When applying magnesium-sulphate solution, the nurse is instructed to take twelve to fifteen thicknesses of gauze that will cover the area involved; if the face is the affected part, holes are cut for the eyes and nose. The gauze is then saturated and applied. A covering of oilsilk or waxed paper may be laid on to retain the moisture. This dressing may have to be renewed even as often as every ten minutes, if necessary, but only twice a day when the parts are bathed with sterile water.

MISCELLANEOUS ARTICLES

Legislative Attacks Upon the Physician

IN preceding numbers of CLINICAL MEDICINE we have called attention to the efforts being made to secure the passage of bills by our national Congress and by different state legislatures which would inhibit the physician in the practice of his profession. Never in the history of medicine in this country have so many efforts been made to hamper the doctor in his work. That you may be in touch with the situation and fully alive to its importance, we present herewith a brief digest of some important legislation now pending or recently introduced and disposed of.

The Proposed National Antinarcotic Bill

In the February number of this journal we discussed the Harrison Antinarcotic Bill, as finally revised at the meeting of the National Drug Trades Conference held in Washington in January. (See pp. 166-168.) This bill was found defective by legal authorities, from a constitutional point of view, and was finally completely redrafted by the executive committee of the Drug Conference, which Conference met again in Washington, April 10-11. Upon this occasion the revised bill was gone over with great care and it will soon be reintroduced by Representative Francis Burton Harrison, of New York. While drastic in some respects, and while it places considerable burdens upon the medical profession, as upon all branches of the trade, the bill, in the main, seems to us a most worthy one, well deserving the support of every physician in the country. Its provisions, as affecting the doctor, dentist, and veterinarian, are as follows:

1. Every doctor, dentist or veterinarian will be required to take out a license, through his local collector of internal revenue, this permitting him to handle any narcotic drugs necessary in his practice. He will pay an annual license-fee of one dollar. Unlicensed persons may not prescribe, dispense or give away any of these remedies.

2. In ordering his supplies of any of the narcotic drugs (including opium and

coca leaves, their salts, derivatives and preparations—among them morphine, codeine, heroin, cocaine, and all tablets, pills, elixirs, mixtures, and other substances containing them), except for a few minor exceptions, he will be compelled to use a properly recorded government order-blank, serially numbered and made in duplicate. One part of this blank will be sent with his order to the dealer from whom he secures his supplies, the other part preserved as a voucher for at least two years. No manufacturer or dealer may supply him or any other dealer, large or small, except when the order is made on this blank.

3. Upon demand of the Commissioner of Internal Revenue, the doctor (or other "retailer") may be required to make a report (on blanks supplied by the Government for that purpose) of the quantity and source of his purchases of these drugs.

4. Throughout this bill doctors, dentists, and veterinarians are treated and classified as "retailers," in exactly the same way as the retail druggist.

5. Any person disposing of, or procuring, or having in his possession any narcotic drugs, except as provided by this law, will be subject to heavy fine or imprisonment, or both.

The intent of the measure and the details are essentially the same as already described in the article in our February issue, to which we refer you. There is great probability that the bill will become a law during this session of Congress.

During the discussion of this bill most of the representatives of the different branches of the trade showed every courtesy and frankly evidenced their desire to be absolutely fair to those interesting themselves especially in the peculiar welfare of the medical profession. However, there was one exception. The attorney of the National Association of Retail Druggists, Mr. Frerichs of Cincinnati, made the statement that the dispensing doctor was in large degree responsible for the improper use and sale of the narcotics among the laity, and this gentleman also made

a strenuous effort to have this bill so modified as to debar physicians from purchasing these drugs except on prescription or through the retail pharmacist. His animus toward physicians who dispense was strongly expressed. He undoubtedly represents an attitude which is very common among retail druggists, and which explains the horde of antidispensing bills being introduced in different state legislatures.

The Kansas Pharmacy Bill

In our March issue (see page 275) we called attention to certain dangers in the new Kansas pharmacy law, which among other things required every physician to write a prescription for any medicine he might supply, numbering this prescription to correspond to a number upon the retainer for the medicine and keeping his prescriptions on file; it also provided that the dispensing doctor's supply of drugs was to be subject to inspection by the state board of pharmacy. As we pointed out, this prescription feature subjected the doctor to onerous supervision. (Turn back to the March number and read the details.) We sent copies of this article, with a personal letter, to a number of medical men in Kansas—and none too quick, as the bill had already passed a second reading and been favorably recommended by the legislative committee. Prior to its passage the prescription feature was stricken out.

The following excerpt from a letter written by a prominent Kansas physician, anent this measure, is enlightening:

This afternoon I was introduced to a gentleman representing the state pharmaceutical association. He wanted to talk with me about this bill.

I said: "You will not claim that you are doing this for the benefit of the 'dear people'?" He admitted that he was not. I then said: "What have you up your sleeve with this bill, by which you druggists purpose to so control the doctor that every time he fills a bottle with medicine he must write out the prescription and put it on file for some official inspection?"

His reply was: "Well, we hope that with this bill in force the doctor will quit furnishing medicines, and will send his prescriptions to the drugstore to be filled."

This is the joker. This is the pith of this bill. The druggist plans that when a patient comes to the doctor's office he will find his physician so corralled by the druggist across the corner that he must or would better write him a prescription and send him to the druggist.

For this medicine he may charge a price often as high as the doctor asks for both medicines and professional services, and for which he expects payment in cash.

We regret that we lack space to print all this correspondence, besides a number of

other letters received from other Kansas physicians, including some prominent officials. One man—he is "high," at least in his own estimation—insinuated that our reasons for "butting in" on the Kansas situation were unworthy ones; while a prominent pharmacist holding an official position threatened us with reprisal!

One word more from our friend just quoted. In a later communication he added:

The gentleman who admitted the object of the bill also stated that this was a national movement—that it would be made first in Kansas, then in all other states. It is well to get on to their plans. Please omit my name and address—but print what you wish.

That this is, indeed, a national movement, the horde of bills introduced in other states intended to hamper the physician is evidence enough. For instance:

The Indiana Antinarcotic Bill

On page 209 of the March number of *CLINICAL MEDICINE* we referred to the proposed antinarcotic bill in Indiana, which was so astutely framed as practically to prohibit the physician from dispensing in his practice any opium, morphine, codeine, heroin, and cocaine. He could not legally administer a hypodermic dose of morphine or put a drop of cocaine in a patient's eye without first writing a prescription.

Happily the physicians of Indiana were quickly aroused to the danger, and representatives of the state medical society, the state board of health, and other medical organizations—men like Wishard, Hurty, and Barnard—grasped the situation immediately and cooperated with the associations of the veterinarians, dentists, and other interested persons to demand a proper modification of the measure. *The Journal of the Indiana State Medical Association* also called attention to the "joker" in this bill, and as finally passed proper exceptions were made for the medical profession.

The Illinois Misbranding Bill

This bill was introduced simultaneously in the House and the Senate. It has already been referred by us as House Bill 210. (See page 363.) The general intent of the bill is excellent. It was submitted from the office of the State Food and Dairy Commission, but it illustrates again the varied and devious forms in which this "joker" is made to bob up in the most unexpected places.

Section 9 of this bill, in which every Illinois physician is interested, reads in part as follows:

No person, firm or corporation shall sell, furnish or give away any cocaine, heroin, alpha or beta eucaine, opium, morphine, chloral hydrate, or any salt or compound of any of the foregoing substances, or any preparation or compound containing any of the foregoing substances, whether salts or compounds, except upon the original written order or prescription of a lawfully authorized practitioner of medicine, dentistry or veterinary medicine, which order or prescription shall be dated and shall contain the name of the person for whom prescribed, or if ordered by a practitioner of veterinary medicine, shall state the kind of animal for whom ordered, and shall be signed by the person giving the prescription or order. Such written order or prescription shall be permanently retained on file by the person, firm, or corporation who shall compound or dispense the article ordered or prescribed, and it shall not be recomounded or dispensed a second time except upon the written order of the original prescriber for each and every compounding or dispensing.

There is more to this section, including an exception for preparations "containing not more than two grains of opium or not more than one-eighth grain of morphine, or not more than two grains of chloral hydrate, or not more than one-sixteenth grain of cocaine in one fluid ounce, or, if a solid preparation, in one avoirdupois ounce."

In spite of the obscurity of the wording it becomes apparent that it would be illegal for the physician to give to any patient any mixture, pill, tablet, or even hypodermic injection containing any of the named narcotics without presenting "a written order or prescription" to some person, presumably a registered pharmacist, who alone, besides himself, is at present legally authorized to dispense these remedies. In lieu of this, it might be interpreted to require the doctor to write a prescription every time he dispensed a narcotic drug.

The same objections obtain against this bill as against the Indiana measure. It is to be hoped that the physicians of this state will emulate their Indiana neighbors in energy of action.

Two Iowa Bills

A number of bills have been introduced in the Iowa legislature which would harmfully affect the physicians of that state. For example, the Carson Bill (House File 538). This bill provides that the physician must be a registered pharmacist in order to be permitted to compound and dispense medicines. Exceptions are made for "emergencies" and in the case of physicians who live more than three miles from a pharmacy. The latter (that is, the doctor remote from the drug-store) must make a record of all medicine dispensed by himself, no matter for what

purpose or in what quantities; and he must even make a record of the ingredients and the quantities of each drug in every prescription.

Another important Iowa bill, which purports to "supervise the sale of patent and proprietary remedies" (House File 690), practically would legislate out of existence in Iowa all remedies except those contained in the United States Pharmacopeia and in the National Formulary.

A "proprietary-medicine commission" is provided for in this bill; and this body would have complete control of the sale of all unofficial drugs, including their labels, literature, composition, and so on, with power to exclude any or all from the state. Also an annual inspection fee of \$25.00 is to be charged for each nonofficial preparation!

Many large manufacturing houses have hundreds, and in some instances thousands, of nonofficial preparations, used mainly by the medical profession. The provisions of the bill would be prohibitive for these preparations. The effect would be to arrest pharmaceutical progress (the leading pharmaceutical houses would be taxed from \$10,000 to \$100,000 annually!), and to destroy the therapeutic freedom of the physician, although on the face of the bill he is left free to prescribe or dispense what he wishes. This bill reached the third reading before it was finally suppressed!

Other Pending Bills

We have called attention to some of the legislation affecting your interests in the middle West. Exactly the same condition prevails all over the country. In fact, there are so many bills of a questionable character now pending, and these are in such a chaotic state, that it is impossible to give an accurate digest of them in these pages. For instance, *seventeen* pharmacy bills have been introduced in the Pennsylvania legislature. Some of these are framed in such a way as to injure the doctor—especially the dispensing doctor—if they should be passed. In all probability, they will be condensed into a single measure, and this the physicians of that state should scrutinize most carefully for any possible "jokers."

We have already referred to the peculiar Texas bill, which endeavored to prohibit physicians in towns of 3000 or more population from dispensing personally any narcotic drugs.

A dangerous bill has been introduced in Rhode Island. (House Bill 352.) It pro-

vides that no person not a registered pharmacist shall sell or dispose of any prescription, preparation or compound, for either external or internal use, containing any ethyl-alcohol, morphine, opium, phenol, cocaine, heroin, etc. This would directly debar the dispensing doctor from carrying a large and important class of emergency remedies essential for successful practice.

We also hear of bills, that are being promoted in Oklahoma, California, Missouri, New York, and other states, which intimately concern the medical profession, *very many* of them directly aimed at the men who dispense their own drugs.

That this is a national movement, as indicated in the correspondence with our Kansas friend alluded to before, there can not be the slightest doubt.

There is a determined effort to make the dispensing doctor the "goat," to hold him responsible for the use of impure and unreliable drugs, to charge him with ignorance and incompetence, to foster the feeling that very often he is immoral, pandering to the appetites of drug-fiends and other weak or vicious individuals.

That there is commercial method in this legislative madness hardly needs saying—it is so palpable. To submit such a wholesale indictment of practically the entire body of country practitioners, as well as of a strong and respectable minority of able city physicians, and to attempt to crystallize this into repressive legislation, is to place a stigma upon the medical profession that it will not bear, and which it only needs to understand to oppose with overwhelming force.

Our attitude toward narcotic abuses is well known. We are heartily in favor of every clean, straightforward, honest effort to wipe out the hellish traffic in habit-forming drugs; but we are unalterably opposed to all proposed laws that are a cloak for insidious efforts to undo the dispensing physician and to add to the economic burden of the public, which latter, ultimately, "foots the bill."

There are undoubtedly dispensing physicians who are using their positions to traffic in habit-forming drugs. With these men we have absolutely no sympathy. They should be ferreted out and driven from the medical profession; and it is the duty of all clean men in the profession to see that this is done. But the number of dispensing physicians of this class is very small when compared with the great mass of those who are doing able, earnest, conscientious work for the mitigation of human suffering.

This article is not written to antagonize the retail drug trade, with which our relation are and have been most pleasant. The average druggist is a square, honorable man, concerned most in making his business a success. We do not believe that the retail pharmacist is generally a party to this cabal.

What we desire to do *now* is to wake up the medical profession to an understanding of the situation. If the doctor sits still and allows himself to be vilified and "controlled" by all kinds of fool legislation, he may as well surrender most in making his business a success. We do not believe that the retail pharmacist is generally a party to this cabal.

But he doesn't have to do this unless he prefers to. *The medical profession is strong enough all over this country to demand, and to get, a square deal.* Only our own inertia can make possible the passage of these iniquitous bills—and, to be frank, our opponents are counting on that very same inertia. Meanwhile these interests are active—mighty active!

Every reader of this article, if his legislature is still in session, can and should do this thing: he should write to his representatives and senators, asking to be kept in close touch with all pending pharmacy bills, all medical-practice bills, and all bills governing the dispensing or sale of narcotic drugs. Tell these representatives that you are on the lookout for "jokers"—and are prepared to fight them. Ask them to look after the interests of your profession. Interest your medical society in the matter, and see to it that this organization is ready to take up the battle for your welfare if the necessity arises.

If your legislature has happily adjourned when this reaches you, keep the matter in mind for next year. There will be a big crop of these measures in 1913-14, and some of them will be put through unless you are alive to the situation.

FRIEDMANN'S TUBERCULOSIS "CURE" CONTRASTED WITH AN AMERICAN REMEDY

In the *Deutsche Medizinische Wochenschrift* for 1903, also in the *Centralblatt fuer Bakteriologie* (originally), Vol. 34, and in the *Zeitschrift fuer Tuberkulose und Heilstaettenwesen*, Vol. IV, Dr. F. F. Friedmann described two cases of what he called spontaneous pulmonary tuberculosis in turtles (*chelone corticata*), one of which showed caseation and cavity formation, the other, disseminated tuberculosis with cheesy foci. From the

cheesy foci he isolated tubercle bacilli that corresponded to the mammalian types, except that they grew at temperatures ranging from zero to 43° C. They showed, however, an optimum growth at 37° C. (98.3° F.), and could not be distinguished from human tubercle bacilli after having been grown at 37° C. for a few weeks.

It does not appear to have occurred to Dr. Friedmann that these turtles, which had come to him from the Berlin Zoological Gardens, and whose tuberculosis he insisted upon designating as spontaneous, had probably been infected by human phthisical sputum expectorated into their tank.

While, as already said, these so-called turtle tubercle bacilli corresponded morphologically and culturally to the mammalian, respectively human, type, they were virulent for cold-blooded animals; however, birds and small laboratory mammalian animals appeared to be resistant or immune, guinea-pigs dying only after infection with large doses.

Dr. Friedmann then attempted to immunize small and afterward large animals, and he reported on his experiments in the *Deutsche Medizinische Wochenschrift* for 1903 and 1904 and in the *Therapeutische Monatshilfe* for 1904. He claimed that the intravenous injection of his turtle tubercle bacilli was harmless both for small and large animals and that it immunized them against infection with virulent bovine and human tubercle bacilli.

Some of this work had been done in the laboratory of Sanitätsrat Dr. Libbertz and of Professor Dr. Ruppel, two investigators of acknowledged authority. In a critical discussion of Friedmann's publication and of his claims, these men showed (*Deutsch. Med. Woch.*, 1905, pp. 139 and 182), by a number of autopsy reports on animals which had been treated ("immunized") with the so-called turtle tubercle bacilli, that the latter may give rise to acute toxic symptoms and which often ended fatally; that they may produce permanent organic lesions that impair the health of the animals and may endanger their lives; that they are not capable of producing an absolute immunity either in small or large animals against infection with virulent tubercle bacilli, since the animals acquired tuberculosis in spite of the alleged immunization, and, further, since at best the tuberculous process apparently was only retarded in those animals which were killed short of thirty days after infection.

Professor Johann Orth, to whom Friedmann had given a number of "immunized"

guinea-pigs, with the request to determine whether it was possible to immunize these animals by the Friedmann method, likewise arrived at an adverse conclusion. In his report, which appeared in *Virchow's Archiv* (Beiheft), 1907, he showed that Friedmann's treatment had not been able to prevent tuberculosis after virulent infection, although it seemed to retard it slightly. In fact, he questioned the propriety of employing the term "immunization" in connection with Friedmann's work.

Of all this work only slight notice was taken in this country, *The Journal of the American Medical Association* abstracting a few of Friedmann's papers. (See *J. A. M. A.*, 1904, pp. 136, 621, 624.) The important control-work of Libbertz, Ruppel, and of Orth was not abstracted or even mentioned.

Since that time no further publications by Friedmann have appeared, and it seems that he turned to the far easier clinical experiment after having failed in his laboratory work, in which controls and autopsies interpose unbiased checks upon hasty conclusions, unless they are deliberately ignored. In spite of the adverse verdict of such authorities as Libbertz, Ruppel, Orth, and Rabinowitsch, Friedmann appears to have administered his living "turtle" tubercle bacilli to tuberculous patients and, worse, to nontuberculous children and infants. (I respectfully call the attention of the Antivivisection Society to the latter proceeding, although I fear that said Society is hardly interested, inasmuch as "only children" are concerned—not beloved cats and dogs.)

No matter how greatly the original virulence of these tubercle bacilli had been mitigated, Friedmann has no means of knowing whether it will not be restored in the human organism in the course of years; and that they do remain alive for years in the organism there is ample evidence to show. For this proceeding he was criticized severely in the Berlin Medical Society, and it forms the greatest objection to his method.

As for his results, Friedmann only could announce that his "immunized" children and infants showed no signs of scrofula or tuberculosis after one year of observation, and in addition call attention to his clinical results. Some of the latter were denied by other observers, while in no case could he prove that the favorable changes were due to his treatment. And, with it all, Friedmann's remedy is a secret one, for he has failed to publish his method of preparing it.

Let us contrast with the preceding the claims of an American physician, Dr. Karl von Ruck, of Asheville, North Carolina, for recognition by his countrymen.

When shortly after the introduction, in 1890, of Koch's old tuberculin that remedy was discredited and when it was considered little short of criminal to employ it, it was von Ruck who, in the face of all opposition, insisted that not the remedy but its improper administration was at fault.

Undisturbed by all unfavorable criticism, he worked and searched until, in 1897, he produced the watery extract of tubercle bacilli (see my paper on "Active Immunization in Tuberculosis," *Illinois Medical Journal*, August, 1911), with which he obtained better and more lasting clinical results than have been shown in any other institution in this country. (See "Reports from the Win- yah Sanatorium," Asheville, N. C., published in 1907, 1909, 1911.)

Through continued and persistent investigation and effort, patient in spite of all setbacks and discouragements, taking new courage with each tiny ray of hope, Dr. von Ruck, after many failures, finally has perfected a remedy by which he not only has protected his laboratory-animals and more than seven hundred children against tuberculosis, but by which in the course of one or two months clinical results were obtained in suitable early cases of active tuberculosis, that otherwise would have required persistent treatment for six months or longer.

The clinical aspect of the immunization, respectively of the treatment, of nontuberculous and of tuberculous children was considered and reported upon by the physician in charge, Dr. C. A. Julian, of Thomasville, North Carolina, in a paper presented to the Tri-State Medical Society, at Norfolk, Virginia, February, 1913. This paper has not as yet been published, but Dr. Julian kindly has let me read it. He recorded the most gratifying improvement in his tuberculous and "suspect" children. They as well as the normal children have "lytic" blood-serum twenty months after treatment, so that they are all protected against tuberculosis infection.

And this remedy is not dangerous like Friedmann's living tubercle bacilli—as little dangerous, indeed, as is the watery extract of tubercle bacilli to which it bears a close resemblance. Nor is it a secret remedy. Just as the preparation of the watery extract was fully described in *The Therapeutic Gazette* for June, 1897, so the preparation of

the new prophylactic vaccine is given in detail in the paper published in *The Medical Record* for August 31, 1912, and in the first "Report of the von Ruck Research Laboratory for Tuberculosis."

But Dr. von Ruck has done more than merely present clinical improvements or cures and to assert results. By means of the recent and latest laboratory methods, he has shown conclusively the presence of specific, antituberculous, immune substances in the blood-serum of his immunized animals, of his immunized child patients, and of his treated patients, and has shown that the blood-serum of his immunized animals and of these children is capable of dissolving tubercle bacilli in the test tube.

Children and patients were never subjected to any risk, they were not given any treatment until its harmlessness had been proven definitely by animal-experiment; and, as a matter of fact, von Ruck's prophylactic vaccine causes less reaction, less discomfort and fewer symptoms of any kind than do the vaccines for smallpox and for typhoid fever.

Dr. von Ruck is not after financial returns. He wants to have his remedy investigated and, if found meritorious, confirmed. Then he wants it made on a large scale for the benefit of every child, of every person in danger of tuberculous infection, and for the benefit of every tuberculous patient who can benefit from it; not in return for a million dollars, but without royalty, without any other recompense than the acknowledgement that he has worked well.

Shall we employ the secret remedy which contains living tubercle bacilli and costs a million, but which is "made in Germany"?

Or, shall we accede to the request of our countryman to investigate the remedy developed by him, and, if found good, shall we accept it as a gift, a preparation of which we know the exact nature?

H. J. ACHARD.

Chicago, Ill.

HE LIKES RITTENHOUSE'S ARTICLES

I am engaged in country practice and am particularly interested in obstetrics, making this a special part of my work. I get the worth of my money in every article in the journal from the pen of Professor Rittenhouse.

I have a fine library on obstetrics, but I consider Rittenhouse the most practical man in this branch in the United States. His articles are so full of meat, so plain and so intensely practical that a first-year medical

student would have no trouble in following his advice. If he has written a book on obstetrics I most certainly want to get a copy of it. If he has not published such a book, I hope he will do so soon.

J. N. CAMPBELL.

Stamford, Nebr.

[Now, just supposing Dr. Rittenhouse's articles in CLINICAL MEDICINE could be amplified and added to so as to cover the practical field—giving just the obstetrical facts you want to know—how many of you would purchase copies? Encourage Dr. Rittenhouse, and see what he will do.—Ed.]

WHAT BECOMES OF PHYSICIANS' PRESCRIPTIONS?

You ask what becomes of the prescription. I can tell you of one case that may interest you. About fifteen years ago, an old physician of the same town where I lived and practiced died. Some months after he died and was buried the druggist to whom this physician had sent his prescriptions put a notice in the local paper, stating that he had this dead doctor's prescriptions on file and would be pleased to fill any of his favorite prescriptions for anybody! No one can tell the number of physicians laid away, at rest in our cemeteries, who are still practicing medicine in the way described.

It is my belief that the physicians who have been and are prescribing are giving away the practice of medicine. There is plenty of evidence that the laity are reaching out for suggestions that will relieve them from going to the physician when sick. I quit writing prescriptions more than twenty years ago, and if the profession at large would do so it would be a step in the right direction.

R. C. HAMILTON.

Chicago, Ill.

THE ENCROACHING NURSE

Your article in a recent CLINIC, on "Encroaching Nurses," is timely and needed. I was glad to see it. You have "hit the nail on the head." Women are extremists, emotional, excitable, and wilful, the very qualities that make for good in her God-given sphere as wife, mother, and teacher; but, perverted, they will dare to go "where angels fear to tread."

Their capacity for good or for evil is amazing, wearing the crown of womanhood, wifehood and motherhood, yes, and spinsterhood,

they are the *reserve moral power of the world*—nurses in the home and everywhere—conscientious, efficient, reliable. Pushed to the front like soldiers, usurping the public places of men, their moral perceptions are weakened and mowed down by the bullets of ambition and a desire to outshine the men. Hence, the nurses you describe. Hence, the aversion to motherhood and domestic duties.

This attitude of women has been urged on by the press, the newspapers and magazines constantly harping upon what they are accomplishing in masculine fields of labor, until they already believe they are far more competent than men, could be better presidents, better officials in every position, and, as nurses, know more than the doctors—and, the pity of it is, deceive them.

No one doubts the capacity of women to do anything, from climbing the highest mountain or outdoing men in the scientific or financial field, to descending to the lowest depths of moral degradation. Indeed, women have the capacity to be angels or to be devils.

There, dear friend, you see what a train of thought one of your articles in THE CLINIC can set to going.

LAURA M. PLANTZ.

Poultney, Vt.

WHAT IS THE NORMAL BLOOD PRESSURE?

The Journal of Advanced Therapeutics for March, 1912, says that different standards have been given as the norm of blood pressure, varying from 120 to 140 mm. Practical experience, however, in blood-pressure studies, in connection with methods of treatment which systematically regulate the pressure, have fixed the standard somewhat lower than former figures. Present findings indicate the normal in the adult male to range between 105 and 120 mm., above which there always are indications discernible—except in athletes—of autointoxication. In youth these are readily reducible, and in most cases to 110 mm., and may be maintained there by a correction of diet and regulated habits of exercise. In the female the standard is rather lower, practically from 95 to 110 mm.

The significance of the various degrees of blood pressure at different ages or stages of hypertension require, according to the stage or condition, relative attention as to correction of causes and conditions.

In the young adult, when the pressure is found above 120 mm., ranging between that and 140 mm., it will generally be found that

the patient is indulging in too large quantities of food, particularly animal food, and that his exercise is inadequate; and indican will generally be found in considerable quantities in the urine. It is not uncommon to find in youths under twenty-five years of age a pressure of 160 mm. In these cases the impending consequences are serious unless radical changes in the habits of the individual are instituted.

SODIUM HYPOSULPHITE

Sodium hyposulphite is a white crystalline substance which, Attfield says, is prepared by heating gently together or setting aside in a warm place a mixture of a solution of sodium sulphite and a little powdered sulphur. Combination slowly takes place, and the hyposulphite is formed. When the excess of sulphur is filtered out of the solution, the latter is set aside to crystallize. The salt, so far, has been used principally in photography, to dissolve the silver off the plates after making an exposure.

Merck treats of this salt under the name of "thiosulphate of sodium," and says that it is soluble in about one part of water, but insoluble in alcohol, and that it is used in parasitic skin diseases, sore mouth, sarcina ventriculi, diarrhea, and flatulent dyspepsia, in doses of 5 to 20 grains. Incompatibles are iodine, acids, barium, lead, mercurous and silver salts, chlorates, nitrates, and oxidizers.

When taken into the mouth, sodium hyposulphite has a sulphurous saline taste, due to its being partially decomposed by the saliva. When ingested, it is more or less quickly broken up into hydrogen-sulphide gas and acid sodium sulphate. The more foul the stomach and intestines and the more fermenting and undigested food the bowels contain, the more quickly the sulphureted-hydrogen gas develops, as shown by the eructations as well as by the flatus. The salt is also a very prompt cathartic, giving the cleanest clean-out, and, owing to the sulphureted hydrogen developed, the cleanest clean-up of any one medicine the writer has ever used.

From the foregoing, its indications are quite plain. Whenever there is undigested or fermenting material in the alimentary canal, sodium hyposulphite is indicated; whenever ptomain formation is active in the stomach or bowels, "hypo" is indicated; whenever ptomain absorption starts autoinfection, "hypo" is indicated; whenever the multifarious symptoms of autoinfection from the

alimentary canal are manifest (and that means 90 percent of the ills flesh is heir to), then hypo is indicated, because it cleans out, cleans up, and keeps clean, all in one medicine.

But whenever practicable, I precede it with what my patrons call my shake-up, which is six granules of 1-6 grain each of podophyllin and calomel. This dose is given at night once or twice a week as needed, to be followed just before breakfast by from 1 teaspoonful to 2 tablespoonfuls of what my lady patients call my mineral water and the men call—well, no matter what the men do call it; their virile appellation fits the case.

This saline purgative solution is made by dissolving 5 pounds of chemically pure hyposulphite of sodium in enough distilled or sterile water to make 1 gallon. Of this, the dose is, for an adult, from 1 to 1 1-2 fluid ounces. I have given the latter dose every three hours for five or six doses, without untoward effects following; it merely relieving a stubborn bowel. Sometimes it appears to be slow to act; but if you persist with good doses, say 1-2 ounce one, two or three times a day, as the case demands, success is sure. At least, it never has failed me in 300 trials.

The reason for its sometimes failing as a cathartic is, that so much of its power is used up as an antiseptic, so that its cathartic power is weakened. So, persist in continued use as suggested, together with plenty of water to drink, and it "delivers the goods."

There are some cases where this medicine has not benefited as much as I wished. This was in the case of two old men past 60 years who were suffering from the effects of imbibing too freely in years gone by in the hellish concoctions which the Missourians make across the border and sell as whisky to the Kansas drouth sufferers. They improved, but not as much as I should have liked to have them. One took to his cups again, and is no better. The other has quit, but is only slightly improved.

The taste of the preparation to some patients is disagreeable, others claim they do not dislike it. The more bad material in the stomach and bowels, the worse the taste. Now, if some wizard of the laboratory over at Ravenswood will take this salt and remodel it into a palatable and still potent medicine, it would then take its proper place among the useful and multi-result-giving drugs of our materia medica.

In mucomembranous enteritis, it is the drug of choice for the relief of this as yet

little understood condition. Solutions of this salt should be clear. If a milky-like cloudiness appears, the water should first be boiled and filtered, before the "hypo" is dissolved in it.

In the last six years the writer has used more than 300 pounds of this salt in his private practice, given in doses ranging from 1-2 teaspoonful once in two days up to as much as one tablespoonful every two hours, or 2 tablespoonfuls three times a day of the solution as above described (viz., 5 pounds to the gallon). No bad effects whatsoever have followed. So, please, let this dispel any fears of the poisonous nature of the drug.

As a topical application, the writer has employed it only as a gargle in follicular tonsillitis. Here the stock-solution, made as above, was diluted with equal parts of sterile water and used as a gargle. In each case—some 12 or 14 in all—the result was very satisfactory.

The treatment was: first, a calomel and podophyllin clean-out, followed by a decided dose of the hypo; then gargle "ad lib." The buccal secretions seem to split it up and the H_2S liberated exerts its disinfectant power, dissolves the membrane, eases the pain, constricts the mucous surface of the tonsils; all of which makes toward the rapid recovery of the patient.

I have endeavored in this article to cover the ground fairly well, but if any of the "family" choose to ask any questions just write me, enclosing stamp, and I shall endeavor to answer. Let all of the "bunch" try this drug and report through THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

W. K. JOHNSON.

Gas, Kan.

[Dr. Johnson signs himself "Just a country pill-peddler." He is a good one, and "knows the game," like thousands of other country practitioners.

Sodium thiosulphate is certainly a valuable remedy, a favorite with the Eclectics, and it undoubtedly has its special therapeutic field, and one deserving of special study. However, as a purgative or laxative it can hardly be considered a success, for this purpose being far inferior (less active) to magnesium sulphate (especially when given in effervescent form), while exceedingly distasteful to most patients.

The specific indications for the drug, according to eclectic works, are: "fermentative dyspepsia, with yeasty vomiting; pallid

mucous membranes, with white, pasty or dirty-white exudate upon the tongue."

The mode of action of the sulphites and hyposulphites is explained by King's "American Dispensatory" as follows: "Their efficacy is due not wholly to the base, but in part at least to their sulphurous-acid radical, which is set free in the stomach, and permeates the whole system, and that without any injury or destruction to the vital principles; though, owing to their deoxidizing qualities, their long-continued use is apt to induce edema and diseases of debility. They are supposed to act by destroying vegetable organisms when present, and by preventing the peculiar fermentation that develops zymotic phenomena; and which prevention may be due either to destruction of the fermentable material or to a modification effected in its composition."

From all of which it appears that sodium thiosulphate has its *special* field in fermentative dyspepsias, with pallid tongue coated with a dirty-white exudate. When this indication is present it often gives excellent service. But as a saline laxative it is inferior to magnesium sulphate; as an intestinal antiseptic it is inferior to the sulphocarbolates; as a systemic antiseptic it is inferior to calx sulphurata. That is our experience at least. Yet in fermentative conditions of the alimentary canal, as described, it seems to deserve all the high praise Dr. Johnson gives it.—Ed.]

SCARLET-FEVER POINTERS

The following excellent "pointers" regarding scarlet-fever—points that should be brought to the attention of the laity—are reprinted from the *Bulletin* of the Chicago Department of Health.

Scarlet-fever is a highly contagious disease.

It is one of the most dreaded diseases of childhood—chiefly because of its after-effects.

The common after-effects are inflammation of the kidneys (nephritis), heart disease, ear, gland and joint affections.

It varies greatly in severity; the severest type can be contracted from the mildest.

Sore throat and vomiting are early symptoms.

The scarlet rash appears in twelve to twenty-four hours after fever; first on the upper part of the chest.

A child with a sore throat must be regarded with suspicion—the trouble may be either scarlet-fever or diphtheria. Keep such a child out of school and away from well children until a positive diagnosis has been made.

The mild case is a greater menace to the community than the severe. It frequently passes unrecognized and is not properly isolated.

It is the height of folly to expose your child to a mild case hoping that it also may have a mild case and "get over with it." As stated before, the severest type of the disease may follow exposure to the mildest.

A scarlet-fever patient must be isolated for a period of five to eight weeks, depending on cessation of infectious discharges.

Well children living in an infected home must stay away from school, including Sunday school; in fact, they must remain at home, away from other children of the neighborhood, until released by the Health Department.

All cases or suspected cases must be reported to the Health Department promptly and infected premises must be placarded, the red warning card appearing at front and rear entrances.

A scarlet-fever patient must not be removed without the consent of the Commissioner of Health.

Disinfection will be performed by the Health Department, free of charge. The common practice of burning sulphur candles does no good.

A scarlet-fever funeral must be held within thirty-six hours after death, and must be private.

When scarlet-fever is prevalent in a community, keep your child out of street-cars; out of theaters or other places where children assemble in considerable numbers; out of neighbors' houses; away from ailing children, especially those with sore throats or rashes.

The disease usually develops in from two to seven days after exposure.

Doctor, if you want to be a factor in the social life of your own community, why do you not get out and distribute circulars like these in your own town? In most cases your city or village government will be glad to meet the expense—but it will wait for a live man like yourself to take the initiative.

As to treatment—read carefully Dr. Candler's article, March issue. Also—there are *two* remedies of value in preventing scarlet-fever. One (and it is a dandy) is our old friend calcium sulphide. The other is a good prophylactic scarlatina bacterin. Know about it?

AN OBSTETRICAL EXPERIENCE

Owing to the peculiarities and the not very little difficulty in which I became involved in an obstetrical case a few years ago, it may be of interest to some of the younger members at least of THE CLINIC "family" to have a concise report given in this, the best medical, journal which comes to my office. At the time of its occurrence it did not come to my mind that the case was an uncommon one and that perhaps not one country doctor in a hundred had had an experience under similar circumstances. For this "snap" in which I was caught here differed in its additional extras from all I ever experienced in my forty years' practice.

In the early morning of a bright July day,

in 1902, I was hastily summoned to wait on a lady living eight miles from town. She was a multipara, thirty-five years old, small, short in stature, and very closely built. To these parents, three children had been born before, the youngest being eight years old. When I arrived at the home of the patient, labor had been in progress more than two hours; and with "waters broken" and discharged, and the os uteri but little dilated, the indications were those of a dry, painful, and tedious birth.

At first sight of the patient, I observed she was suffering intensely. The examination had disclosed the fact that it was a normal head-presentation. But after a strenuous effort with the best of my medicines (and they were alkaloidal), to relieve the patient's suffering and prepare her for an easy and normal delivery, I found that I had made little or no progress in that direction. Seeing the general conditions grow rather worse than better, I at once prepared to use instruments to deliver the patient as speedily as was safe for the life of mother and child.

At this juncture, just as I had gotten under way with the anesthetic (chloroform), having previously arranged to use the husband as the only available assistant, he fainted and fell on the floor of the room—fortunately, without the notice of his wife. Without taking more than a moment to think what I would do, I hastily dispatched the little kitchen-girl across the highway, about thirty or forty rods, to call my married thirty-year-old son from his home to assist me. Although inexperienced in work of this kind, he could give the anesthetic under my direction, as much as was then needed, while I was busy in taking the child.

I had no time to look after patient number two on the floor further than, on the girl's return with my son, to dispatch her for Mr. B., another near neighbor, who, under my instructions, attended to the patient still lying prostrate. Owing to insufficient dilation of the os and dryness of the parts, the delivery with instruments even was difficult and tedious, yet without a ruptured perineum or bruised child. Then, after waiting a short time, I awakened the mother from her deep sleep, and in a short time she began talking and laughing, not knowing of there being in the kitchen nearby a second patient. After some inquisitiveness on the mother's part as to what had occurred during her period of unconsciousness, I presented her the 8-pound baby girl, with which, like most mothers, she was much pleased.

In looking around the room to learn more of the particulars of the occasion, it seemed, she discovered a man—not another doctor, but a farmer—sitting near the foot of her bed, when in great astonishment she exclaimed, "Sam Cannon! What are you doing here?"

The business and situation being a new one to my son, he made no reply. I had not yet informed her as to how much assistance her husband had rendered in the ordeal, nor that he was then sitting on a chair in the kitchen looking as though he was much embarrassed about something.

The news of the irregular incidents of this case soon found their way into the public ear, whereupon the married women of the community expressed their serious disapprobation of a timid husband who would faint at such a critical time for his wife.

G. W. CANNON.

Smith Center, Kan.

A DOUBLE MONSTROSITY

A Savannah correspondent, Mr. Joseph P. Watkins, has sent us the accompanying photographs of a double monster, said to be born near Eastman, Georgia. He supplies the following description:

A freak of nature, and the only similar case known to physicians, with the possible exception of the celebrated Siamese twins, is a boy baby with practically two bodies, joined from the middle of the trunk downward, with two heads and four arms, but one pair of legs and one groin, born recently in the vicinity of Eastman. The head and limbs are all perfectly formed and developed.

The child was born to Eli and Hattie Gardner, colored, on the farm of C. H. Peacock, six miles from Eastman. It was necessary to sacrifice either the mother or the child, and, realizing that the baby would probably not live anyway, it was determined to save the woman. The mother was attended by Drs. J. A. Busch and A. L. Wilkins. S. G. Goolsby administered the anesthetic.

The physicians believe it would have been possible to have kept the child alive, at least for a time, but the death of the mother would have been the certain result. All the organs of the child are normally developed. The two bodies are joined together below the shoulder, merging into one body at the groin. There is apparently one stomach and intestinal arrangement, but separate heart and lungs and other organs for each twin.

Dr. Busch says it is the most remarkable specimen that has ever come under his professional notice. He has preserved the body for further scientific study and observation.

Other children born to the same mother and father have invariably been normal.

This monstrosity is what could technically be called a case of *ischio-thoracopagus tetrabrachius*. While, of course, these mon-

strosities are not common, perhaps they are more frequent than our correspondent seems to imagine. As a matter of fact, practically every malformation of the human body which is capable of forming has occurred at some time and been reported somewhere in medical literature.

For instance, if the reader will refer to the article on "Teratology" in the "Reference Handbook of the Medical Sciences," he will see a picture of a case of *ischio-thoracopagus tetrabrachius* in which the deformity is practically identical with that shown in the accompanying picture. We refer to the photograph of the Tocci brothers, who were born in 1877 and were still alive when this article was prepared.



DOUBLE MONSTER—ISCHIO-THORACOPAGUS,
ANTERIOR VIEW

Several other cases of *ischio-thoracopagus tetrabrachius* have been reported. For instance, Rita-Christina, born in 1829, and Marie-Rose Drouin, born in 1878. These survived eight and seventeen months respectively.

In cases of this kind, the thoracic viscera are usually double or partially double, although the two hearts may be enclosed within a common pericardial sac. The digestive tube is in duplicate until toward its lower end, the two stomachs being arranged with pylori converging. The bladder is

usually single. but in the case of females there are likely to be two uteri. The external genitals and anus are single.

If other readers can give definite reports of monstrosities, with illustrations, we shall be glad to receive them.

A MEDICAL MISSIONARY WANTED IN PORTUGUESE EAST AFRICA

An appeal comes from the American Board of Commissioners of Foreign Missions for a well-educated physician to go to Beira, Portuguese East Africa.

This is a little town having a European population of about one thousand people, and it has tributary to it a stretch of some three-hundred miles, extending from the Indian Ocean to the border of Rhodesia, in which there are about one million natives. In this great area not a single missionary, of any kind, is at work. It is the purpose of the Board to provide its missionaries with a gasoline-launch with which they may tour the two important rivers which flow into the harbor at Beira.

The attitude of the Portuguese government was formerly unfriendly to missionary work in this field, but since Portugal has become a republic conditions have changed, and Protestant missionaries are now said to be welcome.

It is the intention to send an ordained missionary and a medical missionary into this field. Both of these missionaries would first be sent to Lisbon for a sufficient time to acquire a working knowledge of the Portuguese language. While the climate is trying, as is the case all along the east coast, Beira is said not to be especially unhealthy.

Here is a splendid opportunity for a well-educated young medical man who has the physique and the devotion. The Board desires to secure a college man who is also a graduate of a high-grade medical school, and prefers one who has had considerable experience. It will be useless for indifferently prepared doctors to apply. The selected man will be sent to London for a special course in tropical medicine.

Anyone interested should communicate with Mr. Wilbert B. Smith, 600 Lexington Ave., New York City.

WHAT IS THE PRICE OF VACCINATION?

If the editorial door of CLINICAL MEDICINE is not slammed on the vaccination question, permit me a little more space. There is no denying that there is more or less protection

in vaccination against smallpox, and also in the many newer forms of the practice, but, as there is no effect without a cause, or nothing without a price, what is the price of that protection? This is the vital question.

Dr. J. Compton Burnett, of London, once put it about this way: If you are in a state of health and are vaccinated, the protection must lie in the departure from the normal; therefore, when you regain your health (if you do), you are no longer protected. So, if it is wise to sacrifice health in order to avoid a remotely possible disease, vaccination is a good thing, just as good as it is to cut out the



DOUBLE MONSTER—ISCHIO-THORACOPAGUS,
POSTERIOR VIEW

healthy appendix to guard against the possibility of appendicitis, or have a tooth pulled to avoid toothache.

Now as to those Japanese figures in my last letter which Dr. Slee contradicts: here are some more, taken from a pamphlet published by Major Thomas Boudren, of Bridgeport, Connecticut, who got them from the Japanese Embassy at London. I give them condensed.

Vaccination was made compulsory in that country in 1874, and was made stricter in 1876, also in 1885, and again in 1909. During the period from 1885 to 1908 inclusive there were 285,721 cases of smallpox, with 77,512 deaths. So much for the protection. Now as to the price. During this period, accord-

ing to Dr. Kitasato, at the Sixth International Congress on Tuberculosis, that disease (tuberculosis) has increased to an alarming extent in Japan. In prevaccination days it was rare. So has diphtheria increased. Cancer was not mentioned, but in compulsorily vaccinated countries it has increased in the past few decades about 700 percent—and is still increasing. No one can prove that this is the price for the vaccine protection, but the increase in these and many other diseases seem to go hand in hand with the vaccines.

I could easily rip up Dr. Slee's long communication (to my own satisfaction, at least), but fear to tax the good nature of the genial men who run CLINICAL MEDICINE.

E. P. ANSHUTZ.

Philadelphia, Pa.

[Dr. Anshutz's argument, à la Burnett, that protection against smallpox through vaccination is secured at the expense of health, is ingenious, but unsupported by evidence. Immunity may be natural or acquired. Some people are *naturally* immune to smallpox. Did they somehow sacrifice health to secure their immunity? Vaccination is simply an artificial method of stimulating the powers of the body to resist a specific disease, and properly performed it is practically free from danger, as Dr. Slee has shown.

Frankly, the Japanese statistics aren't worth much. As Dr. Slee has already pointed out, the enforcement of the vaccination laws in Japan has been notoriously lax, and what evidence we have seems to show that those who had smallpox in the epidemics cited were principally those who had not been vaccinated at all, or at least unsuccessfully. If Dr. Anshutz can submit definite evidence that people known to have been successfully vaccinated subsequently contracted smallpox in any considerable number this will be worth something in support of his contention.

His statements concerning the increase of tuberculosis and cancer in Japan and other countries is equally worthless. It is another example of *post hoc propter hoc* reasoning. Let him first prove that these diseases have increased among the vaccinated while they have been stationary in the nonvaccinated.

The fact is that all the so-called "diseases of civilization" have increased in countries rapidly adjusting themselves to modern and more or less artificial conditions. But meanwhile in America and Europe, where vaccination is most rigidly enforced, tuberculosis is markedly *decreasing*. Is that because of vaccination, or in spite of it? The fact is,

as Dr. Anshutz himself admits, "no one can prove that this [increase in cancer and consumption] is the price for the vaccine protection."

We like the good spirit that Dr. Anshutz has shown in this discussion. He is far too good a man to cling to the antivaccination delusion, and sometimes we hope to have him on our side of the fence. As a consistent homeopathist, believing in the law of similars, he ought to be a good immunologist.—Ed.]

VACCINATION: A REPLY TO ITS OPPONENTS

I have read the discussion, in the March number of this journal (p. 257 et seq.), on "What Is the Truth About Vaccination?" and wish to offer some comments. While it is true that there must of necessity be difference of opinion on many subjects, it seems to me that no intelligent person, especially an observant medical practitioner with a mind open to the truth, can do otherwise than accept as thoroughly established the fact that vaccination is a preventive of smallpox. Certainly, a casual observance of the statistics available on the subject will, or they should, convince any reasonable man of the efficacy of vaccination as a means of stamping out the dread disease of smallpox, and the statistics presented by Dr. Richard Slee are sufficiently convincing, in my estimation at least.

I have had some little experience in this matter, having been through an epidemic of smallpox. And it was the Simon pure, genuine, unadulterated smallpox, with no modern modifications. Some confluent cases came under my notice, and the faces of some of the victims were disfigured with the swelling and eruption until they were unrecognizable; all semblance to the human features being gone.

At the time I was city physician and had under my especial care two districts; one occupied by German residents, the other by Irish. Sanitation, so far as cleanliness was concerned, was in full force; the residences were clean. Tenement houses were as clean as were the houses occupied by the better classes. Yet, the smallpox followed the line of German occupation for six miles or more. I would at times have three cases of smallpox in one little room, in one instance there being as many as five. There were hundreds of cases of the disease.

I was among the sick daily, taking careful notice of the progress of the disease, even

examining the mouth and throat for the eruption. I had not for myself the slightest fear of the disease and went through the epidemic unscathed; for I was thoroughly protected by vaccination; but not one of the victims who came under my notice showed any mark of vaccination. Was it accident, or was it not rather a circumstance to strengthen ones belief in the protective power of vaccination?

The question may arise as to how it happened that this smallpox epidemic was confined almost exclusively to the Germans, when the Germans in Europe are universally vaccinated; how this can serve as an argument in favor of vaccination. In explanation, I will say that the epidemic occurred only among the unvaccinated German-Americans, those born and raised in this country. In Germany, compulsory vaccination is the law, while in my state no such law then existed. Furthermore, this epidemic continued until at last the authorities made vaccination compulsory and, with the aid of the police, all school-children were forced to submit to it. Thereupon the epidemic died out because of lack of human material.

I have stated that I also had charge of an Irish district at the same time. Conditions as to sanitation were the very antithesis of what obtained among the German residents. That entire district was filthy. There was no cleanliness anywhere; the people were careless of themselves; the tenements were simply vile; some were so unspeakably foul and reeking with filth that I refused to enter until some little improvement had been ordered by our board of health. Nevertheless, not one single case of smallpox occurred among the Irish contingent in that whole district. So far as I could ascertain, every individual—man, woman, child—showed marks of vaccination. Was this accidental or was it a scientific demonstration of an established truth, that vaccination certainly does protect from smallpox?

"Vaccination is disgusting," is it? I wonder whether our medical friend ever saw a genuine confluent case of smallpox. I, assuredly, know of nothing more disgusting: the odor is sickening—the appearance is frightful—all semblance to humanity is gone—and the patient is shunned by all, none will even approach the house.

Now, with all due regard for the opinion of the writer opposing vaccination, I must say that it seems strange, indeed, that—in the light of scientific research of today, as made clear by the open columns of the medical

press—for these long forty years he can remain an avowed opponent of protective vaccination. It would seem that blind prejudice must have usurped open-minded observation.

Certainly, if anything in this world of ours has been proven beyond all cavil, it is, that vaccination is preventive of smallpox. Most surely my own experience, as herein detailed, is proof in support of it. For, how else can the absolute immunity of the vaccinated community be accounted for, as against the epidemic that raged among the community of unvaccinated? And for squares and squares in the town the line of demarcation was the middle of the dividing street: the one class on one side, the other class on the other. Very strange, if this occurrence was only a coincidence!

JAS. L. NEAVE.

Dresden, O.

PURE AIR

I have a good thing, and I want to share it.

All night long I am permitted to breathe a perfect atmosphere, and, yet, I am shut in completely from drafts. How is this accomplished?

In the early fall, when I wished to conserve the heat of the house, I closed all openings to keep it comfortably warm. If this were all I had done, I had yet shut out God's pure, free air. However, by a subtle arrangement I have succeeded in keeping the house comfortable and at the same time I have a perfect atmosphere to breathe.

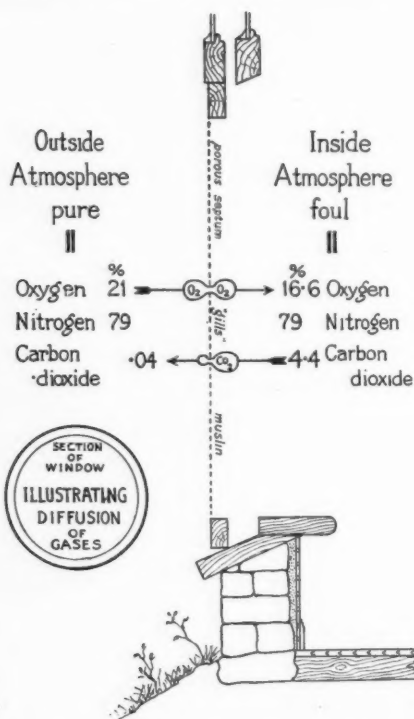
You ask, "What is this subtle arrangement?" Subtle is a better word than mysterious; but such words necessarily are brought in because of an invisible process connected with the arrangement, which process I am endeavoring to reveal to the eye of the understanding. Be patient, and we will detail the arrangement, which, by the way, is exactly analogous to the process by which the blood (red blood-corpuscles) are charged with oxygen from each breath of air taken into the lungs.

Each bedroom of my house has the lower half of one window fitted with a muslin-covered frame just outside the lower sash. We call them "gills," because of their similarity of purpose with the gills of a fish—supplying oxygen.

These "gills" are brought into operation by raising the lower window-sash. By this arrangement the two atmospheres—the outside pure air and the inside vitiated air—are

brought so closely together that, for the purpose of the diffusion of oxygen and carbon-dioxide gases, the contact is complete, and through the meshes of the muslin septum gas diffusion is very rapid. "Gases are to each other as a vacuum."

In this process of interchanging of gases there is a notable conservation of heat as to



the inside atmosphere. This fact has been accounted for ingeniously by Dr. Le Wald, of the Rockefeller Biological Institute, of New York City, who says: "As the gas molecules pass one another through the meshes of the cloth the outgoing molecule gives up its heat to the incoming molecule, and in this way the inside temperature is wonderfully maintained." The oxygen from the outside leaps in to supply the deficiency caused by the indwellers.

The same process goes on in our body with each breath we take. When we inbreathe, the air-tubes, terminating in blind ends, expand; the residual air in the lungs retires into these blind ends, followed in by the tidal air; the oxygen from the tidal air leaps into the residual air (as into a vacuum) and, by the same impulse, on into the blood,

changing it from a purple hue to a bright-scarlet—from the venous to the arterial state. (Oxidation.) This process is almost instantaneous, and, yet, it is performed where the intercepting membrane is of so dense a structure that it will retain a pulsating stream of blood.

Surely, it is axiomatic that oxygen diffuses faster in air than in liquids.

Now, keep these two processes side by side—the blood in the body and the air in the bedroom, both kept replete with oxygen by diffusion. Take for example a house-tent (an ideal enclosure), presenting porous cloth on all sides. Outside of it the pure, free air is all around. Outside of it the great reservoir of pure, free air, while the inside air is being depleted of its oxygen and vitiated with carbon dioxide by the indwellers. But the two atmospheres are in constant close contact through the meshes of the fabric. Splendid contact for diffusion of gases. This tireless automatic process is keeping the inside atmosphere like the outside—up to its full quota (1 : 5) of oxygen by diffusion.

The atmosphere is a mixture, not a chemical compound, therefore to remove a part of the oxygen does not disintegrate it.

What a splendid precaution this would be for every house heated by hot-air furnace. In my own house, well equipped with "gills," I smell smoke and gas from a newly kindled fire, because the joints of the furnace are not gas-tight; but shortly it is all diffused out through the "gills."

How wonderful was the deliverance of my family last winter from natural-gas (methane) poisoning. An open gas-jet poured gas into the sleeping-apartments all night till 5 o'clock in the morning; still, no harm came of it. Why? Because the gas was so rapidly diffused out through the "gills" that no one spoke of the night's rest as other than a season of good reparative sleep. This confirmatory testimony was elicited from each member on the following morning without their knowing what had taken place through the night.

Doctor, is there a gas-jet loose or leaking, any sewer emanations, anything of this sort, into your house and have you closed it up effectually from the outside pure atmosphere so that disease-germs can thrive and multiply, because the oxygen can not penetrate and thus come to the rescue? You have my consent to use these cheese-cloth screens freely.

Doctor, you have patients and friends who cannot afford a house-tent (although, if it were better understood, a house-tent is a

poor man's economical friend). They can afford "gills"—and what will not thorough oxidation do? It will burn up lung sewage and spoil the habitat of disease-germs.

What smells sweeter than a tent atmosphere? How can you account for the improvement in a consumptive—fever disappears, appetite increases, the bacillus tuberculosis disappearing from the sputa, they take on flesh, and all this principally because these patients subject themselves twenty-four hours out of twenty-four to a pure atmosphere (21 percent of oxygen).

This is what can be accomplished when the matter is gone into seriously.

Let us prevent tuberculosis and many another malady by seeing to it that our patients, rather our clientele, have as pure an atmosphere to breathe as is possible in each case.

JOHN F. LOCKWOOD.

Kansas City, Mo.

A CASE OF RECURRENT MANIA

During the last four weeks I have had under observation from time to time a girl twenty-six years old, afflicted with insanity. Her people claim that these attacks were brought on through diphtheria when she was eight years of age. However this may be, I think that heredity plays a role, since, upon questioning a sister with whom she lives, I elicited a history of mental aberration in at least two members of the family on the father's side. The lucid intervals have lasted from two to five years, and this fact accounts for her not being taken to an asylum, as the people are daily waiting for the return of her reason.

Her's is a mania with rapid flow of ideas and speech—a constant logorrhea that never ceases night or day—busy talking back and forth; pulling out drawers, emptying their contents when up; when in bed, continually changing position or rearranging the bed-clothes and pillows. Due to the disturbance of idea-associations, we find her wandering from one topic to another. In five minutes she has mentioned a dozen different people—she is a queen, a pet, is floating with the Titanic, in fact, she, herself, is the Titanic. This intense activity, sensory and motor, is truly phenomenal. Her mania is of the happy sort—there is a marked somatic well-being, she is laughing and singing alternately.

A leading symptom in these maniacal states is exaltation of personality; at times her ravings will assume a typical grandiose

character, as when she declares in an oratorical accent that she is the Virgin Mary, or even the Holy Ghost himself.

This patient is about as interesting as another one—a man—I saw many years ago. His peculiar mental ailment was that of grandeur and imperative ideas, a sort of *folie du doute*, as the French call it, his compulsory idea taking a peculiar form. Seated on the floor with three building-cubes such as children ordinarily play with, he would put these together and ask himself the question, "Why is it that one block put on the top of another block makes three blocks?" and this question he would repeat for hours at a time.

Being called upon to treat the girl patient first mentioned, I was at first at a loss how to proceed. When I first saw her, she had not slept for more than one week. I prepared a mixture of potassium bromide and chloral hydrate, but found that "horse-doses" were none too strong. In fact, with these two drugs I failed to quiet her or put her to sleep. Next I tried morphine sulphate, 1-2 grain every three hours, but that seemingly only made matters worse; she became unmanageable, grabbed a butcher's-knife and nearly decapitated a baby.

It was at this juncture that the happy thought came to me of administering hyoscine, morphine and cactin hypodermatically. Two tablets of full strength in one dose brought her down. In less than ten minutes we had her snoring serenely on her back, and she slept soundly for nine hours. The effect of this rest was surely marvelous, for her mental horizon seemed clear for hours, her logorrhea ceased, and she partook of food.

Of course, the next day she again resumed her exalted position and her wanderings began anew. It has thus become necessary to inject every other night two of these tablets to induce sleep and partly restore her mental equilibrium.

After these injections she takes more nourishment, which we know is an important factor in these states of mania. The patient is always overworked and underfed. The loss of nervous energy is great indeed. If she proceeds as well as the last week, I think she will soon have another lucid interval.

H. G. HENRIKSEN.

New Market, Minn.

[We referred Dr. Henriksen's report of this interesting case to Dr. James G. Kiernan,

the well-known alienist of this city, who gives us the following helpful comment:

"The condition described is recurrent mania, of which condition Dr. Henriksen has drawn an excellent clinical picture differentiating it from the popular but erroneous medical idea of mania (simple excitement, obsessions or impulses). The cerebral condition in emotional exaltation is identical with the euphoria (good feeling) of morphine whence the contraindication observed by Dr. Henriksen.

"The treatment of the insane interval, while needed to prevent exhaustion, is less important than the prophylactic treatment of the interval precedent to the attack. The symptoms indicating the onset should be observed and treated. While the recurrent tendency is an expression generally of inherent congenital vice of constitution, still this tendency before becoming rhythmically fastened on the constitution is often an instability which, being relieved of strain, fails to pass over into morbid states."

The method of treatment pursued by Dr. Henriksen is interesting, but it is questionable if the prolonged daily use of the hyoscine-morphine would be advisable. Really the patient should be sequestered in an institution.—Ed.]

THE ALLEGED DEATH FROM STOVAINE SPINAL ANESTHESIA

Readers of CLINICAL MEDICINE will remember that in Dr. Kelley's report of the Clinical Congress of the Surgeons of North America allusion was made to a death under spinal anesthesia, occurring in the clinic of Dr. William Seaman Bainbridge. Inasmuch as some injustice has been done, we reprint herewith a full report of this case, as given by Dr. Bainbridge as an addendum to his original paper on spinal analgesia, read at the A. M. A. meeting last June. He says:

During the Clinical Congress of Surgeons of North America, held in New York City in November, 1912, a patient, on my service at the New York Polyclinic Hospital, died after a lumbar subarachnoid injection of stovaine, preparatory to the performance of an operation for hernia.

History: P. H., Irish, male, age given as 50 years; probably 60 or more; chronic alcoholic. Came to my clinic at the New York Polyclinic Medical School and Hospital October 18, 1912, seeking relief for a condition which proved, upon examination, to be right inguinal hernia, at times irreducible, and causing great suffering. The man gave a history of having felt a sharp, tearing pain in the right groin while operating a taxicab about three months previous to coming to the clinic. Since that time he had been to several dispensaries

in a vain search for relief. He had used a truss without success. Failing to obtain relief by other measures, he wished to be operated upon at once.

From the general physical examination, the patient was found to be in a very bad condition, as the result of the prolonged excessive use of alcoholic stimulants. The following conditions were present: general atheroma of the arteries; renal insufficiency due to chronic Bright's disease; marked enlargement of the liver; myocarditis, with systolic murmur at the base; emphysema; râles over the bases of both lungs. A history of chronic gastritis was also elicited.

The patient's general condition was such that immediate operation was no deemed advisable. He was told, accordingly, to abstain from the use of intoxicants, and to refrain from lifting or straining; he was put upon a diet, tonics, etc., and was kept under observation for about three weeks. Despite the fact that only slight improvement followed this regimen, he insisted upon operation. He was then admitted to the hospital on November 14, and prepared for operation the next day.

Because of the man's general condition, inhalation-anesthesia was considered contraindicated. He was prepared, accordingly, for operation under spinal analgesia. Before the members of the Congress of Surgeons present, I injected into the cauda equina twenty-six minims of a one-percent solution of stovaine. The patient, who presented no symptoms differing from those of the average subject during the spinal injection, was then sent to another room to be operated upon by Dr. E. M. Foote and Dr. Claude A. Frink, of my staff, while I concluded my lecture before the Congress. The man's mind was perfectly clear, his pulse was good, there was no nausea, no cyanosis, no respiratory embarrassment—in fact, *none of the symptoms of stovaine poisoning*. He suddenly turned pale, said, "I am dying," and instantly died.

The case was made a Coroner's case, and an autopsy was performed the next day, with the following findings:

Marked edema of the brain, so-called "wet-brain"; myocarditis; atheroma of aorta; aortic insufficiency; emphysema of the lungs; chronic interstitial splenitis; chronic gastritis; chronic enteritis; and chronic interstitial nephritis. Spinal cord showed no gross lesion.

The Coroner's inquest was held on December 4, 1912. The jury, after listening to the testimony of the above facts and a number of experts as to the indications of death by stovaine poisoning, did not find that the man died of stovaine poisoning, but that death was caused "by pathological conditions" as above described, and all concerned were exonerated from blame.

THE PROPHYLACTIC VALUE OF VACCINES IN TYPHOID FEVER

Dr. J. Clement Clark says that, since 1903, the Springfield Hospital for the Insane in Sykesville, Maryland, each autumn cared for from ten to twenty cases of typhoid fever among patients and nurses (*Maryland Medical Journal*, 1913, January).

In June, 1911, after consultation with the state board of health, it was decided to employ antityphoid vaccination. Accordingly all patients were inoculated, both male and

female, except those immune from previous attacks and those suffering from tuberculosis or diseases of the vascular system and kidneys, together with several of the physicians, nurses and employees, in all 890.

Each injection was followed by local reaction, consisting of redness and swelling of variable degree, disappearing in about twelve hours. The general reaction was slight, and consisted in malaise, headache, backache, and slight fever, like the initial symptoms of typhoid fever. In only two cases did the temperature rise to over 100° F. and these proved to be unsuspected cases of tuberculosis. The injections were made in the afternoon, the patients thus resting all night, and nearly all were ready for breakfast the next morning. The reactions after each of the three injections were the same.

Not a single case of typhoid fever developed among the inoculated during the summer and fall, although one nurse who refused vaccination, one male attendant who was employed after the vaccinations and one patient who entered the hospital after the vaccination contracted the disease, thus showing that the bacilli were somewhere around.

Early in June, 1912, all patients admitted during the year since the last vaccination of 1911 were vaccinated. In all there were 1316 inoculations among the patients and employees without a single abscess or any untoward after-effect. There has been but one case of typhoid fever in the hospital during the summer or fall of 1912, and this was in a patient who had not been vaccinated.

THE LABORATORY DIAGNOSIS OF PATERNITY

The "Red Back," i. e., *The Texas Medical Journal*, for last December contains an editorial discussion of an unusually interesting subject, namely, the diagnosis of paternity, which appears to have become possible through the experiments of Mayoral and Jimenez, reported in *La Médecine Scientifique* for February, 1912. Although these experiments do not produce final and definite results, it is readily to be seen that eventually they may be productive and that the possibility of establishing the paternity in a given case of pregnancy will be of the most far-reaching medicolegal importance.

Basing their experiments on the reaction of Elsberg in the early diagnosis of cancer, Mayoral and Jimenez sought to apply it for diagnosis in the first months of pregnancy

and also for determining who is the father in any given case of pregnancy. If the principle of Elsberg's cancer reaction were applicable to pregnancy, red blood-corpuscles of the father, emulsionized with an isotonic solution of sodium chloride, injected under the skin of a pregnant woman would produce an erythematous, somewhat painful spot at the site of injection within six hours.

The experiments of the two authors named are reported to have given the following somewhat astonishing results:

1. Three pregnant women, injected with emulsionized red corpuscles from their husbands, gave a positive Elsberg reaction.

2. One of these three women, injected with erythrocytes from her husband, and at the same time with those from a stranger, gave a positive reaction with the former and a negative one with the latter.

3. Thirteen pregnant women were injected with the emulsion from males with whom they had never cohabited, and twelve of them gave negative results, while in one the reaction was doubtful.

4. Corpuscles from two husbands gave positive reactions when injected into their respective pregnant wives, but negative results in three other pregnant women whom they had never known.

5. In five nonpregnant women who had previously borne children to their husbands, there were negative results in four, and a doubtful reaction in one.

The editorial in question points out that the interest of these investigations would have been greatly accentuated if Mayoral and Jimenez had extended their inquiries to the children of the husbands whose blood induced positive reactions in their pregnant wives, and that the possibility of a practical value of their findings would have become correspondingly enhanced. Although the entire matter is still in its experimental stage and manifestly it is not as yet possible to draw any positive conclusions, these investigations are of decided interest and importance, and it is to be hoped that they will be carried on to some definite conclusion.

A STORY OF AUTHORITY, BY MULTATULI*

Hassan sold dates in the streets of Damascus. If I say that he sold them, I really mean that he did *not* sell them, for his dates were so small that nobody wanted to buy them. With sorrow and envy he saw how

*Multatuli means: I have suffered much.

everyone favored the rich Aouled who lived next to him on a mat. For they live on mats in Damascus, with very high flats and no roof. The wealth of Aouled did not consist in houses, but in a garden which was very fertile, so that the dates which grew there were as big as three ordinary ones; and thus the passers-by bought the dates of Aouled, and not the dates of Hassan.

There once came to the city a dervis who had wisdom too much and nourishment too little, at least he exchanged his knowledge for food, and now we shall see how well our Hassan fared with this barter.

"Give me to eat," ordered the dervis, "and I'll do for you what no khalif can do: I will force the people to buy your dates, by making them large, yea, larger than the dates of Aouled. How large are those?"

"Alas, dervis! sent by Allah—I kiss your feet—the dates of Aouled—Allah give him cramps—are three times larger than ordinary dates. Come in on my mat, cross your legs, be benefited, and teach me to enlarge my dates and to compel the people to buy them."

Hassan might have asked why the so very wise dervis needed food; but, then, Hassan was never overparticular. He served his guest with cooked leather, a leftover of a stolen goat. The dervis ate till he had enough, then spoke: "Three times larger than ordinary dates are those of your neighbor how large do you desire yours to become, oh Hassan, son of I don't know who?"

Hassan thought over matters for a while and then said: "Allah give you children and cattle! I should like my dates to be three times larger than you can make them."

"Very well," the dervis made reply; "here is a bird which I brought with me from the far east. Just tell him that *any one of your dates is as big as three of your dates.*"

"I wish you wives and camels, oh dervis—who art odoriferous of olives—but how will it be of use to me if I tell the bird what is *not*?"

"Do as I tell you," replied the wise man: "for I am a dervis, so you should not understand me."

Hassan wished the bird long feathers and called him rook; but it was not a rook; it was a small bird that in a way resembled a raven, with loose tongue and skipping gait. The dervis brought it along from Indaloes, where it had been shipped by merchants who came over the ocean from the country where men resemble negroes, although it is a long way from Africa. Hassan named the animal

rook, because he observed that anybody who is praised swells in size; also, that, on the contrary, he who needs anything of anyone shrinks in dimensions. At least this was so in Damascus.

So it was that Hassan shrunk, and he said: "I am your slave, oh bird rook; my father was a dog and any one of my dates is as big as three of my dates." "Excellent," said the dervis; "continue in that same way, and fear Allah." So Hassan kept on with his speech. He feared Allah, and all the while he said to the bird that his dates were large beyond possibility. And Hassan's reward for his virtue was not wanting. No three times yet had the khalif do kill all the women of his harem no mother yet had found time to prepare her daughter for the market at Roem Hassan had not yet met a lonesome strayed goat to keep him company on the mat, and, behold! the bird cried:

" my father is a dog (this was not necessary, but the bird repeated what Hassan had said) my father is a dog, get long feathers, the dates of Hassan Ben " (I do not know the name of Hassan's father and if the man was a dog it does not matter) "the dates of Hassan are three times larger than they are."

It is true, the wiseacres in Damascus proclaimed against this—but not for long. There was in the voice of the bird something that made the air vibrate in a way that influenced even refraction; the dates grew, grew, grew in the eyes of all. And the bird always kept on, "The dates of Hassan are three times larger than they are."

And they grew. All the people overgaped themselves to bite in them, and Aouled grew very thin. But Hassan bought many goats and lambs, and he built them a roof over his mat. He became exceeding honest and found it shameful when someone who had no lambs himself stole one of his. And Hassan continued to fear Allah.

For all this piety and all this wealth he thanked the small bird, who always told the same lie, and by the repetitions made truth of the lie. Everybody in Damascus found the dates of Hassan to be large, everyone was compelled to buy them. Everyone except Hassan himself. For in secret Hassan got his dates from Aouled, whose only customer he was.

And so it has remained in the world until this very day.

D. A. ZWIGTMAN.

Niles, Mich.

[The reader of *CLINICAL MEDICINE* is invited to interpret this little story in his own way!—Ed.]

DOES THE MODERATE USE OF ALCOHOL LOWER HEALTH AND EFFICIENCY?

Before the Association of Military Surgeons at Washington, D. C., October 2, 1912, Col. L. Mervin Maus delivered an address on the subject indicated in the title. Col. Maus showed that the action of alcohol, even in so-called "moderate doses," is undesirable and harmful, and that as a whole the important and deleterious role played by alcohol is not realized sufficiently. Col. Maus epitomizes the principal effects of alcohol, both psychological and pathological, as follows:

1. Through its inhibitory action on the brain centers alcohol lowers all of the mental facilities, such as intelligent thought, perception, memory, judgment, proper comparison of people or things, caution and quickness of action. If continued for years the intellect is permanently affected and the mental stigmata transmitted to succeeding generations.

2. It lowers the moral standard, lessens self-restraint, is productive of unreliability, untruthfulness, dishonesty and crime.

3. It affects the resisting powers of the red and white corpuscles, and of the blood serum, against diseases.

4. It lessens working capacity, marching endurance, accuracy and rapidity in rifle firing, ability to command troops and solve military problems, to navigate and maneuver war vessels, to act as members of courts and military boards, to properly perform administrative work, to develop the intellect and fit one for the higher duties and responsibilities of life.

5. It causes sickness, impairs health and usefulness, adds greatly to the non-efficiency of both officers and men, adds additional burden and cost to the medical department, deprives the government of otherwise valuable officers and enlisted men, and forces them on the retired or pensions lists, with corresponding increase of governmental expenditures.

6. Vital statistics clearly prove that the moderate use of alcoholic beverages reduces the longevity of mankind. They have a distinctive bearing on public officers, many of whom have passed years on sick status as a result of their use. Many have died in the prime of life, or have been retired from active duty through their direct or indirect influence.

The same may be said of enlisted men in both services.

7. It causes gastric catarrh with its train of neurotic and digestive disturbances, cirrhosis of the liver, Bright's disease and albuminuria, chronic pharyngitis, erysipelas, gout, neuritis, glycosuria, arteriosclerosis, paralysis, fatty heart, exhaustion and sunstroke, epilepsy, imbecility, melancholia, dementia and insanity.

Colonel Maus shows that serious mistakes have occurred among officers in command of land and sea forces, as a result of alcohol-use. He claims that medical officers, the proper performance of whose duties involves the safety and lives of others, should especially be debarred from the use of alcoholic drinks while on duty, because it is a well-known scientific fact that alcohol lowers all of the intellectual functions, deprives men of judgment and unfits them for important duties. He goes still further, and claims that total abstinence should become a requirement in the election of our presidents, governors of states, senators, congressmen, judges and all officers within the suffrage of the people. He demands that no one who uses alcoholic beverages should be appointed to the important positions of cabinet officers, members of the supreme bench or district courts, heads of government bureaus, civil or military, to the command of military or naval forces or any other position of importance and responsibility.

Col. Maus holds that the government has the right to require every officer and enlisted man on the active list to safeguard himself against vicious habits which are inimical to health and efficiency, just as the use of non-sterilized water is forbidden to prevent amebic dysentery, and certain articles of diet to prevent malaria and beriberi; just as vaccinations have been enforced against smallpox, typhoid fever and diphtheria, and mosquito-bars against malaria, so the total abstinence from alcohol should be enforced, since this is one of the greatest factors in the causation of venereal diseases, impaired health, and nonefficiency in our public service.

Radical as the position of Col. Maus may be, it is not by any manner of means a "new-fangled notion." Records were found on Babylonian cuneiform tablets forbidding the use of wine in any form to persons engaged in public business, asserting that work done for the government by persons who used wine could not be perfect. All builders of palaces, army officers and superintendents of

public work were required to abstain absolutely from all spirits. During the reign of one of the Rameses attention was invited to public disasters following the use of wine by the leaders, and orders were given under pain of death for total abstinence among public employees.

HOW ONE DOCTOR AVOIDS REFILLING OF PRESCRIPTIONS

Dr. F. M. Summerville sends us a copy of his prescription blank, which we reproduce below. It will be observed that the pharmacist is positively forbidden to refill a prescription without the doctor's consent—an excellent plan. We have observed that in a number of new pharmacy bills pending in different legislatures the refilling of prescriptions, especially of narcotic drugs, is forbidden by statute.

F. M. SUMMERVILLE, M. D.

EMLENTON, PA. OFFICE HOURS—2 TO 5 P. M.

'PHONE 158 7 TO 9 P. M.

NOTE.—This prescription is only for the person named hereon, and is ordered for the conditions existing at the time of consultation; it is, therefore, not to be renewed or a copy given without my written consent.

NAME.....

THE AGE WE LIVE IN

We certainly live in a wonderful age,
And few would dare deny it;
But I do not pretend to pose as a sage,
And certainly would not decry it.

Our fathers were proud of eight minutes a mile,
While we ride a mile in a minute;
If we were contented with some other style
We certainly shouldn't be in it.

Our mothers would make them a dress in a day
Without a machine or assistance,
Their habits were simple, and that was their way;
They needed much less for subsistence.

But now our daughters must have automobiles,
With elegant suits to display them;
Some have wheels in their heads and some in their
heels,
But I have no wish to betray them.

Our boys we are proud to have in the professions,
So we send them to high school and college.
They study the ball games and a few other things,
And return surfeited with knowledge.

We hire them as lawyers to make us our laws,
They say it takes brains to compound them.
'Tis hard to believe it, yet every one knows,
They themselves are the first to get 'round them.

And, if with a neighbor you have a dispute,
'Bout a cow or a crop, who has grown it,
You likely will find by the time you get out
The lawyer's the one that will own it.

If we feel "out of sorts" to the doctor we go,
For a hurt or a pain or an aching;
He'll give you a pill or a powder, or so—
The cure will be sure for the taking.

If your eye or your ear or your liver or heart
Gets useless and causes you bother,
He'll cut it clear out and give you a start
By filling its place with another.

And, if in the field of invention we go
And gaze at our fast locomotion,
Astonished we see how much science we know
On the earth, in the air, on the ocean.

The Wrights in their tighta are "up in the air,"
The Wilsons have gone even higher.
Mr. Bell now will sell for a price that is fair,
Since Marconi dispenses with wire.

And if we go searching to find pedigree
Of Hurly or Spencer or Darwin—
They say we originally came from the sea
And were fathered by some sort of varmin;

And later baboons, perhaps chimpanzee,
Or some other species of monkey.
If judged by the actions of some that we see,
More likely they came from the donkey.

For parsons or priests we haven't much use,
And their creeds, we are better without them,
And hope every man does the best that he can,
Since they know so little about them.

In government we are no better, but worse—
Municipal, state or the nation—
Our morals have got so accustomed to steal,
It doesn't cause any sensation.

Life's getting so fast it sure cannot last
As present conditions are going;
And what is ahead of the living or dead
We have mighty small chance of knowing.

But some that will fight, and we hope they are
right—
The life here is only beginning.
And right over there in that country so fair
There are many less chances of sinning.

That the spirit will be in the land of the free,
Away from the body's possession;
Upward and onward the watchword will be
And life a continuous progression.

But I'll be content whatever is sent,
Tho' some of our hopes may be blighted,
For we have a Friend who is true to the end,
And everything wrong will be righted.

H. S. JONES.

St. Joseph, Mich.

A good home-remedy for earache is the following: Place cotton in the ear and blow warm tobacco smoke through it from the stem-end of a pipe after covering the pipe-bowl with thin cloth. Warm vaseline often stops the pain. When these fail, warm 10 drops of a 10-percent solution of cocaine and pour it into the ear.—S. S. Bishop.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by *GEORGE F. BUTLER, A. M., M. D.*

I AM like Joshua Billings—I don't believe in fighting. I am solemnly against it; but, if a man gets to fighting, I am also solemnly against his getting licked. After a fight is once open, all the virtues that is in it is to fight the other party.

Doctor, a restful spring day, with God listening to the musical murmurs of the forest, will strengthen you for many a days' struggle in practice in the city.

Here are some significant symptoms which it is well for every doctor to remember. A tendency to sleep with the hands tightly clasped over the head suggests some form of dyspepsia or stomach trouble. A dull pain at the back of the head, with lassitude and despondency, generally is evidence of phosphatic urine. Drooping eyelids that cannot be voluntarily raised, except following injury or disease causing paralysis of the third nerve, are apt to indicate apoplectic plegia. A small, movable, pea-like body in the lobe of the ear, a deposit of urate of sodium, suggests a gouty or rheumatic diathesis.

When a patient with albuminuria is swollen, the kidneys are apt to be enlarged; when emaciated, these organs probably are contracted. When the feet alone are swollen, the heart usually is involved; when the abdomen only is swollen, the liver usually is at fault. A persistent bad taste on rising in the morning, independent of stomachic derangement, is apt to point to threatening cardiac trouble. Club-shaped ends of the fingers suggest phthisis, heart disease or emphysema.

Constant burning heat of the body, regardless of temperature, combined with lingual tremor and difficulty in preserving equilibrium, is most suggestive of threatening paralysis agitans. When the muscles of the abdomen flap up and down with the movement of the diaphragm, suspect lesion or disease of the spinal cord. When a perfectly sound leg drags after its fellow and there is inability to raise it from the ground, it is apt to be evidence of impending disease of

the spine. Inability to stand steadily with eyes closed, nervousness when descending stairs, raising one leg unnecessarily high to cross it over the other, hesitating in rising from a chair when bidden, are considered as partial evidence of incipient locomotor ataxia.

The recollection, that neuralgic pain is usually only the manifestation of some other underlying difficulty and that the careful search for and the discovery of this difficulty and its consequent removal will relieve the neuralgia, is perhaps the most important part of the treatment of this affliction. At the same time, patients suffering from neuralgic pain urgently demand speedy relief, so that it behooves the physician to have ready for instant employment a certain class of drugs known to exercise a sedative influence upon nerves or nerve-centers that are giving pain because of irritability.

Among the common causes of neuralgia, aside from those conditions which depend upon organic lesions in nerve-centers, are anemia, eye strain, the conditions called uricacidemia, and other disorders of metabolism closely associated with a rheumatic or gouty diathesis, carious teeth, nervous exhaustion, and, lastly, the abuse of such drugs as coffee and tobacco. It is surprising how frequently the arrest of the tobacco-habit in men will cause neuralgic symptoms to disappear, or, in the case of women, the stopping of the use of excessive quantities of coffee will result in benefit. These neuralgic manifestations by no means infrequently affect other portions of the body, besides the head. Frequently violent abdominal neuralgia, thoracic pains or ovarian neuralgic tenderness take the place of cephalalgia.

It can not be doubted that there are two sorts of neuralgia, very different from each other in almost every respect and, yet, too apt to be confounded. The one precedes or arises from a local and circumscribed cause, which, in some cases, may be removed by a

surgical operation or by magnetism. The other appears to depend upon a constitutional cause, that is, upon great derangement of the general health, and this is treated successfully only by attention to such derangement. The latter species is usually seated in some of the most superficial nerves, returns at irregular intervals, induces little or no change in the appearance of the part afflicted either during life or when examined after death, and it may, therefore, be supposed to have a constitutional, i. e. systemic, origin, rather than merely a local and circumscribed one.

Some authorities consider neuralgia to be dependent upon an inflammatory state of some portion of the nervous system, but I do not consider this correct. It is by no means rare to meet with individuals who, without any physical or rational sign of organic disease, and sometimes even while enjoying the most perfect health in other respects, suffer acute pains (occasionally even extremely acute pains) in the interior of the chest. This pain may be momentary or of long duration, intermittent or continued, confined to one spot or diffuse, fixed or movable, while sometimes it shoots by fits along the walls of the chest and neighboring parts, along the course of the intercostal and the interior nerves of the chest of the congeries of nerves in the arm-pit; frequently it is deep-seated between the spine and shoulder blade. It is worthy of notice here that many young women are very subject to pain in the side about the middle of the false ribs. This is commonly connected with some derangement in the health, poor blood, and sometimes with a more or less pronounced lateral curvature of the spine.

Depleting measures are by no means proper in this affection, the most certainly operative measures being those which tend to invigorate the system and establish the general health.

Sometimes these pains are confined to the region of the heart, but frequently they extend at the same time or else vicariously over a greater or smaller portion of the lungs and stomach. Sometimes they exist simultaneously in the superficial nerves of the neck and extend along the tracts of the branches supplied by these to the anterior parts of the chest. Still more frequently, at the very time they are felt most severely in the heart, they shoot with corresponding violence along the nerve of the arm-pit and more particularly along the nerve of the arm to the elbow

and sometimes as far as to the fingers, simulating the organic affection called breast-pang or angina pectoris. It is of consequence to observe that this affection sometimes so strongly resembles angina pectoris as to call for the exercise of considerable judgment to distinguish one from the other. This fact should inspire the patient with hope and induce calmness and composure, while leading the medical advisor to offer his opinion cautiously and with some reservation in the majority of instances.

Neuralgia is met with much more frequently in some years than in others, and it seems that the prevalent type of disease influences its development.

In a general way, whatever has the greatest effect in invigorating the system and restoring all the functions of the body to a state of healthy action will be most uniformly of the greatest service in the treatment. Among the drugs that are commonly employed for the relief of these conditions, we have various combinations of the coal-tar products, such as antipyrin, phenacetin, and acetanilid, as also the bromides and caffeine; while among the other drugs of well-known reputation, aconitine, gelseminine, and cannabis indica, next to the coal-tar products, are, in their ability to relieve neuralgic pain, greater than any other drugs, whether the neuralgia be mild in character or as severe as that met with in sciatica.

Then, too, it is not to be forgotten that in many cases of neuralgia depending upon poor circulation and nervous exhaustion, full doses of strychnine will produce valuable results, although they cannot be relied upon, when disconnected from other supporting treatment, to be of any permanent advantage. Gelseminine is another valuable drug in the neuralgia affecting chlorotic girls. Gelseminine is especially valuable in congestive neuralgia; and in diathetic and intercostal neuralgia aconitine and asclepidoid are invaluable remedies. In the neuralgia of exhaustion, both strychnine and atropine are valuable.

Ovarian neuralgia usually yields to gelseminine, atropine or macrotoid. Visceral neuralgia also will yield to these drugs, but when the trouble seems to be in the rectum æsculin acts very well indeed. Ocular neuralgia yields temporarily to physostigmine or hyoscyamine, although, if the neuralgia is due to some form of eye strain that can

be corrected, an oculist should be employed at once.

A combination of remedies which without doubt is of much value in various neuralgias depending upon malarial intoxication, and one which also does good in neuralgic pains not arising from the cause named, consist of a few grains of quinine and a minute dose of morphine; the only difficulty with this remedy being that the patient is apt to become addicted to the morphine.

Then we have another drug which without doubt is of very great value in certain forms of neuralgic pains, particularly in the head, namely, chloral and the butylchloral hydrate, the latter being especially valuable in facial neuralgia and neuralgia from carious teeth. Chloral hydrate often will prove of singular service where other remedies have failed. It is a noteworthy fact that in reflex dental neuralgia this drug seems to be of less value than in other forms of pain affecting the distribution of the fifth nerve and that it is practically useless in the pain of toothache. It also possesses the additional advantage of causing a tendency to sleep, which is useful in many cases.

In old persons with atheromatous blood-vessels and high arterial tension who suffer from violent neuralgic pain affecting the fifth nerve, very great good can often be accomplished by the use of full doses of nitroglycerin administered simultaneously with full doses of strychnine. In addition to these measures, local freezing of the tissues surrounding the superficial nerve, by means of ether or chloride of ethyl, thrown in a fine spray, or by the use of ice and salt, is not to be forgotten; while, on the other hand, in other instances a high degree of heat applied by means of a big bag of salt or other warmed object will be efficacious.

In neuralgic pains of deep-seated nerves, massage in the neighborhood of the nerve and over its course, with a round stout glass rod which will dig deeply down into the tissues, often is very useful; particularly if an ointment containing menthol is smeared over the part to lubricate the skin and to exert a benumbing and counterirritant influence of this derivative of peppermint. In still other cases, a continuous galvanic current will give great relief.

I wish to remind the reader that many cases of neuralgia are due to toxemia of some sort or other. Then, at times, there will be found

a condition of uricacidemia, the overcoming of which will cause the neuralgia to disappear.

The urine should always be examined for the doctor's guidance. On general principles, free elimination by skin, bowels, and kidneys should be maintained. Many cases of obstinate neuralgia can be entirely cured by cleaning out the bowels, rendering the blood more alkaline and overcoming the acidemia by means of saline laxatives and alkalis.

The principles involved in the rest-cure were formulated as long ago as at the time of Soranus; almost all the psychologic principles which are taught today were outlined by this alienist two thousand years ago. With the moral treatment, which is so essential in the conditions benefited by the rest-cure, Soranus included baths, massage and allied procedures. The basic principles of the rest-cure were worked out first in insane-hospitals and later adopted by neurologists.

While Dr. Weir Mitchell's name has been most commonly associated with this mode of treatment, and while this neurologist has done much to popularize it (and, it may be said in passing, to render the quackish practice of it by nurses easy), still, he merely applied in public what many physicians had previously done without ostentation. His conception of the subject, however, was an erroneous one, being based on the assumption that obesity is a sign of health. But, it is now generally recognized that obesity is an expression of suboxidation and hence by itself no evidence whatever of mental or physical improvement; indeed, it may be an expression of mental deterioration, since it occurs when emotional stress fails to provoke physiologic reaction. Among the insane this has long been recognized.

Careful perusal of the earlier works of Dr. Mitchell shows that he considered over-feeding of more importance than change of environment and mental and physical rest. It is obvious, moreover, that he failed to recognize the dangers of introspection in the cases of patients where the rest-cure is indicated. The fact that the mental state in rest-cure patients was injured by this subjectivity, and that many disturbances of the heart, lungs and other viscera result, had been pointed out by the alienist Tissot more than a century ago.

(To be Continued.)

AMONG *the* BOOKS



WHIPHAM: "DISEASES OF CHILDREN"

The Medical Diseases of Children. By T. R. C. Whipham, M. A., M. D., physician to the Evalina Hospital for Sick Children; assistant physician to the Children's Department of the Prince of Wales' Hospital; lecturer on Diseases of Children at the North-East London Postgraduate School. With 67 illustrations. London: University Press. Published by Hodder and Stoughton, and Henry Frowde. Price \$3.75. 1912.

There are many good things to be said about this book, and also many criticisms that might justly be made of it. Its author is well and favorably known as a good pediatric clinician of large experience and ripe judgment, and these qualities shine through every page of his writing. We think, however, that he has made a mistake in overdoing his evident attempt to condense and epitomize the subject. We notice, also, that he still clings to a great many of the older views concerning certain diseases which more modern research would seem to have rendered almost untenable. To illustrate:

Dr. Whipham still regards rickets as a disease of faulty nutrition, saying nothing whatever about the contributions by the Italian school to the etiology of the disorder; he still teaches rheumatism as a metabolic condition, and chorea as a sequel of rheumatism, whereas modern understanding of these diseases tends more and more to the infectious nature of the one and the biologic origin of the other. The author is at his best in the discussion of digestive and circulatory diseases in children. Furthermore, he is clinically helpful everywhere. We must confess, however, that the book, as a whole, does not compare very favorably with some of the better American works on pediatrics.

BRAUN AND FRIESNER: "THE LABYRINTH"

The Labyrinth. An aid to the Study of Inflammations of the Internal Ear. By Alfred Braun, M. D., and Isidore Friesner, M. D. With 50 figures in the text and 34

halftones on plates. New York: The Rebman Company.

Strange as it may seem, it is only in quite recent years that the labyrinth of the ear has become an explored and tractable region. For its exploitation we are chiefly indebted to Jansen, Neumann, and Ruttin, all of Germany. These men during the past ten years have concentrated their attention upon this structurally small but functionally highly important organ, and have at last furnished us with a most complete and valuable understanding of its anatomy, its physiology and its peculiar pathology.

The authors of the book before us evidently are followers of the investigations of the three great German otologists named, and it should be understood that we mean no disparagement of their own effort when we say that it is practically a summary of the masters' researches. This treatise is, however, something more than a mere summary; it is a recasting of their work into American forms of thought and angles of view. And, above all, it is a useful clinical application of all the most recent data, so as to constitute what its title claims for it, "an aid to the study (and we might add, to the treatment) of inflammations of the internal ear."

This work is, of course, essentially one for the specialist; and we can hardly see how an ear-specialist can afford to be without it. But every man who ever has anything to do with the ear or with diseased conditions arising from the inner ear, will find that it sheds a vast amount of illumination upon what have hitherto been obscure pathologic problems. The mechanical make-up of the book is excellent; the illustrations are works of art.

HART: "PSYCHOLOGY OF INSANITY"

The Psychology of Insanity. By Bernard Hart, M. D. Lecturer in Psychology, University College Hospital Medical School; medical superintendent, Northumberland House Asylum. New York: G. P. Putnam's Sons. Price \$0.40. 1912.

The Englishman may always be depended upon to extract the practical useable nub

from any subject that he tackles. That is his national matter-of-fact temperament, which earned for him the sneer of Napoleon that the English were a "nation of shopkeepers." It is also the quality which has made England the world's manufacturing center. It is also the characteristic which has made her the great practical clinical clearing-house for a very large part of medical science. Thus, Jenner with his vaccination, Crookes with his vacuum-tube, Wright with his opsonic index are typical examples of the practical English mind "practicalizing" profound scientific principles—which, by the way, usually originate in the German mind.

Here is another instance. The far-reaching and somewhat nebulous theories of Freud and Jung and Kraepelin are focalized and crystallized by Bernard Hart into a clean-cut, systematic, psychologic diagnostique. With clearness and simplicity of method, Hart has reduced the complex phenomena of insanity to a few orderly, basic concepts and shown that they follow similar definite psychologic laws as those which govern normal mentality. He makes it plain that the processes of repression and dissociation and projection in the insane mind are but exaggerated phases of the natural processes by which the normal mind seeks to escape conflict with itself; and he furnishes a key to the solution of the vexed problem of insanity so simple and so logical that he who runs may read—and, reading, may apply it. This is by far the most illuminating little work on the subject that we have seen in a long time.

SUTHERLAND: "DISEASES OF CHILDREN"

The Treatment of Disease in Children. By G. A. Sutherland, M. D. Second Edition. Oxford University Press. Price \$3.75.

This book, the author states, aims to be "a practical guide to the young practitioner." New methods of treatment which have been personally tested or are believed to have permanent value are described, and throughout, an attempt has been made to outline one such treatment fully, while omitting mention of other remedial agents or methods that may prove applicable.

As to the phase last named, we sincerely regret this tendency to give a "set treatment" for a named disease, for infinitely more satisfactory results must follow the intelligent administration of the right remedies for pathologic conditions of the individual—be they causative or symptomatic. It is true

that we have to contend with certain fairly constant groupings of conditions, but the successful pediatricist of today knows how impossible it is to formulate a single fixed method of treatment for even such a simple disease as measles. Furthermore, the medicinal agents recommended by the author are, in the main, old-fashioned and decidedly devoid of elegance or palatability; large doses of some of the most nauseous mixtures familiar to the past generation are prescribed, despite the fact that the essential ingredients can now be so easily administered in the form of tasteless small tablets or granules.

On the whole, the volume, although it contains much that is worth while, does not commend itself to the reviewer as a satisfactory "practical guide to the young practitioner." Rather its perusal would serve to strengthen the opinion of the pediatricist "retiring on account of age and increasing infirmity" that the procedures dear to his preceptor are still decidedly *au fait*.

MORTON: "GENITOURINARY DISEASES AND SYPHILIS"

Genitourinary Diseases and Syphilis. By Henry H. Morton, M. D., Clinical Professor of Genitourinary Diseases in the Long Island College Hospital. Third edition, revised and greatly enlarged. Philadelphia: The F. A. Davis Company. Price \$5.00.

The rapidity with which the two prior editions were disposed of and the present insistent demand for this book would tend to prove that Doctor Morton has succeeded in furnishing the active practitioner with just the information he requires.

No branch of medicine has made greater advances in the past decade than the department of genitourinary surgery, and within that period our conception of the etiology and pathology of syphilis has been materially changed. The spirochæta pallida has been definitely recognized as the causative micro-organism; the possibility of communicating syphilis to animals has been proven; the existence of the disease in the latent stage can now be established by the Wassermann reaction; and, finally, Ehrlich has given us, in salvarsan, a remedy equal and in some respects superior to mercury. The possessor of Morton will find himself *au courant* with the technic of modern syphilography; the chapters upon "Diagnosis" and upon "Treatment" being particularly practical and complete.

Urethroscopy and cystoscopy receive unusual attention, and for this, if for no other reason, the volume will appeal strongly to the man who has to work alone under difficulties. Prostatitis and vesiculitis in their various stages are exhaustively considered, while the remedial measures—both operative and therapeutic—which have proved most effective are described in detail.

The commoner diseases of the genitourinary organs are not passed over merely with a paragraph or two, but receive the attention they demand from the man in the field. It is especially pleasant to note the frequency with which an outline of rational therapeutic procedures replaces the caption, "Operative Technic." The illustrations accompanying the text are new, numerous and really informative, each step of an operation and the special appliances used being clearly shown. The general practitioner, the reviewer is inclined to think, will regard Morton as the best treatise on the subject for his library, and it is quite certain no "G.-U." man will be able to resist the exquisite plates and half-tones illustrating the various operations.

BOOKS RECEIVED

The New Psychology: Its Basic Principles and Practical Formulas. By A. A. Lindsay, M. D. Portland, Oregon: The Portland Printing House. 1908. Price \$1.25.

Hypnosis and Suggestion: Their Nature, Action, Importance, and Position Among Therapeutic Agents. By W. Hilger, M. D. Translated by R. W. Felkin, M. D.; with an Introduction by Dr. Van Renterghem. New York: The Rebman Company. 1912. Price \$2.50.

Suggestion and Psychotherapy. By George W. Jacoby, M. D. With illustrations. New York: Charles Scribner's Sons. 1912. Price \$1.50.

Primitive Psychotherapy and Quackery. By Robert Means Lawrence, M. D. Boston and New York: The Houghton Mifflin Company. 1910. Price \$2.00.

Psychotherapy. Including the history of the use of mental influence, directly and indirectly, in healing and the principles for the application of energies derived from the mind to the treatment of disease. By James J. Walsh, M. D., Ph. D. New York: D. Appleton & Co. 1912. Price \$6.00.

Insanity in Everyday Practice. By E. G. Younger, M. D., M. R. C. P. Second edition, revised and enlarged. Chicago: The Chicago Medical Book Company. 1910. Price \$1.25.

The Way with the Nerves. Letters to a neurologist on various modern nervous ailments, real and fancied, with replies thereto telling of their nature and treatment. By Joseph Collins. New York: G. P. Putnam's Sons. 1911. Price \$1.50.

Reason and Sentiment. An address delivered in the aula of the University of Berne, March 3, 1910, by Paul Dubois. Authorized translation by Edward G. Richards. New York: The Funk & Wagnalls Company. 1911. Price 50 cents.

Hygiene and Public Health. By B. Arthur Whitelegge, M. D., B. Sc., and George Newman, M. D., D. P. H. Illustrated. New York: The Funk and Wagnalls Company. 1910. Price \$1.75.

The House-Fly, Disease Carrier. An account of its dangerous activities and of the means of destroying it. By L. O. Howard, Ph. D. New York: The Frederick A. Stokes Company. 1911. Price \$1.00.

Principles of Microbiology. A treatise on bacteria, fungi, and protozoa pathogenic for domesticated animals. By Veranus Alva Moore, B. S., M. D., V. M. D. With 101 illustrations. Ithaca, N. Y.: Carpenter & Co. 1912. Price \$3.50.

Modern Microscopy. A handbook for beginners and students. By M. I. Cross and Martin J. Cole. Fourth edition, revised and enlarged, with chapters on special subjects by various writers. Chicago: The Chicago Medical Book Company. 1912. Price \$2.00.

Elementary Bacteriology and Protozoology: the Microbiological Causes of the Infectious Diseases. By Herbert Fox, M. D. Illustrated with 67 engravings and 5 colored plates. Philadelphia: Lea & Febiger. 1912. Price \$1.75.

Monographs of the Rockefeller Institute for Medical Research. A Clinical Study of Acute Poliomyelitis. By Francis W. Peabody, M. D., George Draper, M. D., and A. R. Dochez, M. D. New York: The Rockefeller Institute for Medical Research. 1912. Price \$1.00.

Fresh Air and How to Use It. By Thomas Spees Carrington, M. D. New York: The National Association for the Study and Prevention of Tuberculosis. 1912. Price \$1.00.

Cholera and Its Treatment. (Oxford Medical Publications.) By Leonard Rogers, M. D., F. R. C. P. New York: Oxford University Press. 1911. Price \$4.00.

Vaccine Therapy in General Practice. By G. H. Sherman, M. D. Chicago: Successful Medicine, Inc. 1912. Price \$1.50.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERY

ANSWER TO QUERY 5903.—“Dermatitis Exfoliativa.” The query in the April number of *CLINICAL MEDICINE*, concerning exfoliative dermatitis, has interested me. I should like to suggest to the doctor that he try Buckley’s regimen of a rice diet. Give the patient three meals a day of well-boiled rice, bread and butter, and water. Absolutely nothing else, and let him continue this for four or five days. No special regulation as to amount eaten is required, and if three meals are not enough

to satisfy his hunger, let him have some of the same food between the regular meals. I know that this sounds absurd, but I have tried this treatment twice in somewhat similar cases and the satisfactory result prompts me to pass the word along. Dosage with a saline laxative enough to keep the bowels open constituted the only other treatment.

M. E. COWEN.

Green’s Farms, Conn.

QUERIES

QUERY 5905.—“Aleppo Button, or Oriental Sore.” A. A. T., Turkey, a constant reader of this department, writes the editor as follows:

“In this country, it seems, almost everybody has what is known as Aleppo button (*furunculus orientalis*)—a truly terrible disease. You find the disfiguring scars on faces everywhere you go. For study, if I like, I can find hundreds, even thousands, of children. It is an endemic sore, develops like a papule, then ulcerates. Although I have read that it is caused by a parasite, I am very desirous to study the subject further, and so ask a few questions; namely: (1) What methods are employed in order to detect Leishman’s bodies? (2) What books deal with this disease most fully? (3) What treatment has been most successful? As I am in the local hospital, I have a great chance to study the disease, which has been a great curse to the native population.”

As regards literature on the subject in question, if you have access to Hare’s “Modern Treatment,” or, for that matter, to any of the more recent works on diagnosis, you will there find leishmaniosis defined, and also the

causative protozoan parasites (*leishmania infantum*, *leishmania tropica*, and *leishmania donovani*) illustrated. The plates in Hare are particularly instructive; and the article on kala-azar and on oriental sore is worth careful study.

The three infections caused by the presence of a species of the protozoan parasite leishmania are: kala-azar (dumdum fever); infantile splenic anemia (*leishmania infantum*); and oriental sore (tropical ulcer).

In kala-azar, the *leishmania donovani* is found in the blood and tissues. It is probably transmitted by means of the bite of some cimidæ.

In infantile splenic anemia, occurring in children in Italy, Sicily and northern Africa, the *leishmania infantum* is invariably present. It is difficult to distinguish this protozoan from *leishmania donovani*, both undergoing a flagellate cycle of development when cultivated upon blood agar. Nicoll considers that the dog is the natural host of the parasite. The method of transmission is unknown, but without doubt depends upon some insect.

The form of leishmaniosis in which you are particularly interested, i. e., tropical ulcer

(Aleppo button, Delhi boil, oriental sore), is due to infection by the specific parasite *leishmania tropica*. Morphologically, it is indistinguishable from *leishmania donovani* or *leishmania infantum*. Nicolle, however, who first cultivated the organism, thinks that the cultural forms may be distinguished.

Typical oriental sores have been produced in monkeys by the inoculation of debris from human ulcers. Flies, bedbugs or other insects may transmit the parasite, but it is now believed the infection is directly transmitted from individual to individual.

In the affected tissues there are mononuclear cells containing scores or hundreds of the parasites. The organisms exist within the cytoplasm of the cells and do not invade the nucleus. You will also find the *leishmania donovani* bodies illustrated beautifully in the "Third Report" of the Wellcome Research Laboratories connected with the Gordon Memorial College, at Khartoum, Abyssinia. It is published for the Department of Education of the Sudan Government by Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden, London, the price being \$5.00.

Dr. Bitter, pathologist to the Egyptian Sanitary Department, probably can give you a great deal of information. He reports the finding of *leishmania donovani* bodies in chronic ulcers in an Egyptian, confirming thoroughly the findings of these bodies in "Delhi sore." The opinion of the investigators would appear to be that the organism producing these cutaneous lesions, although morphologically similar to that of kala-azar, is essentially different in nature.

In the "Review of Recent Advances in Tropical Medicine," a supplement to the "Third Report" of the Wellcome Research Laboratories (price \$2.50), oriental sore is considered at some length. The author believes that the condition does not exist in the Sudan, but remarks, "as this is associated with the presence of parasites identical with the Leishman-Donovan body, and as kala-azar occurs in that country, a further study of chronic ulceration is highly desirable."

He quotes Manson's discussion, in which the fact is pointed out that, since exposed parts of the body are mostly affected, the disease is probably caused by some insect attacking those parts. Bugs and fleas, therefore, would be excluded, whereas mosquitoes and flies would be the effective carriers. He describes an attempt to inoculate a kala-azar patient from a case of oriental sore. Unfortunately, both the test inoculations and the controls failed. He is inclined to regard

oriental sore as a blood-disease, and states that when it is cured in one place it will break out in another.

Sambon calls attention to the fact that the disease, which is "one of towns," occurs in dogs, and the typical parasites exist in their sores.

Cox describes two types of ulcer, the "male" and the "female," so called. The male ulcer is oblong in shape, like a date-seed (hence the name of "date-mark"), with an irregular, undermined edge and an indurated margin; it is tender on pressure, with a dry, uneven surface, and is extremely indolent in character. The ulcer either remains stationary in size or it gradually enlarges, sometimes attaining a diameter of two inches; as a rule, the size varies from that of a hazelnut to an inch in the wider diameter. On reaching its permanent size, the sore retains its characteristic appearance. Then it soon forms a dry pustular scab, which increases in size in successive layers, until it becomes a nodular crust, when it drops off, leaving the raw surface of the ulcer bare, and then the scabbing starts afresh.

The characteristics of the male ulcer apply also to the female ulcer; the only difference being that the latter, instead of forming a dry scab, is constantly discharging a pale-yellow watery pus, which adds to the distress of the patient. Both kinds leave a permanent scar.

For treatment in the late stages, Dr. Cox recommends strong sulphur ointment (20-percent) applied on resin plaster with a layer of wool on the top, to graduate the pressure of the bandage; this is applied daily (for four or five days) until the surface of the ulcer looks clean. Then tar ointment is applied until granulations appear. The latter are touched with copper sulphate, then an ordinary dressing of boric ointment is applied. Healing occurs in from one to six weeks. Arsenic in medium doses helps the cure.

On the same subject, Hare says: "The treatment of oriental sore depends very largely upon the stage of the disease; the earlier the condition is diagnosed and treated, the better the results obtained. As a rule, unless treatment is persisted in and faithfully observed, it is unsatisfactory, and after the lesion is well advanced it will be found that many cases resist any form of treatment which may be employed. In the earliest stage the lesion may be destroyed by a Paquelin cautery or completely excised, but these measures should not be undertaken unless the lesion be very small and when but

little destruction of tissue has occurred. Some authorities advise against such treatment at any stage.

"A useful method of treatment is a 2- to 4-percent solution of copper sulphate applied locally; or boric-acid ointment or silver nitrate may be used, the latter having many ardent supporters. If silver nitrate be used, it should be in the form of the solid stick, the surface of the ulcer being lightly touched with it at intervals of two to four days, and then washed with a potassium-permanganate solution and covered with an antiseptic dressing. The use of strong acids or caustics is not to be recommended. The ulcer, after it has once become clean and healthy in appearance, will heal slowly if protected from infection; and this should be the principal aim in the treatment of oriental sore.

"In those instances where the ulcer continues indolent and there appears to be a mixed infection present, thorough scraping of the surface with a Volkmann's spoon, followed by an antiseptic dressing, will be found of benefit in stimulating the healing process. The Roentgen rays are useless, and internal medication is of no benefit, beyond improving the general condition of the patient.

"When the case is first seen, if there are any scabs present, they should be removed and the ulcer washed with a 1 in 1000 solution of bichloride of mercury or a weak solution of potassium permanganate; and this cleansing wash should be repeated every day, after which some antiseptic ointment, such as boric-acid ointment or the ointment of oxide of zinc, may be applied. The French practitioners recommended a 5-percent ointment of permanganate of potassium.

"Many other drugs have been used in the treatment of this infection, but none of them can be said to act as a specific. Despite the most careful treatment, many cases persist for months, and even years, without appearing to be benefited; and it may truly be said that in the vast majority of cases cleanliness and protection of the lesion from secondary infections is attended with as good results as the use of more radical measures, as scrap, cauterization, and medication with strong antiseptic ointments.

"Intercurrent infections should be properly treated, and the general condition of the patient looked after carefully. A change of climate is often most beneficial, and the diet should be generous and nutritious in character. Tonics are generally useful, and anemia and debility are frequently present in

patients suffering from this infection, and little good can be expected from the local treatment of the disease if the general health is poor. For this reason, every effort should be made to improve the physical condition of the patient.

"The prophylaxis of this disease consists in the avoidance of insects, protection of the skin from insect bites, and the prompt disinfection of such bites or of other wounds received in regions where oriental sore is endemic. In order to avoid infecting insects and as direct transmission is possible, the sores should be kept covered with an antiseptic dressing."

We are inclined to think that saturation of the individual with calcium sulphide will prove beneficial. Echinacoid and the triple arsenates with nuclein should be exhibited in full doses.

Were we in your position, we should be inclined to try iodine locally, securing penetration of the drug by cataphoresis. The high-frequency current (vacuum electrode) might also prove destructive to the parasite.

We trust that you will make some experiments along these lines and report your results for the benefit of the profession.

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QUERY 5906.—"Intestinal Obstruction and Starvation." C. McF., Oregon, requests us to describe the symptoms of starvation, and more especially he desires to be advised as to whether cachexia is always present in starvation. "Could worry," he queries, "so affect digestion, nutrition and assimilation that death might result quickly? In a case of persistent vomiting, with no bowel action after taking violent purgatives, and other attempts, would it not be advisable to stop feeding until the intestinal tract was opened up so that material could pass through?"

It is exceedingly difficult, in view of our limited knowledge of the actual conditions obtaining, to express an intelligent opinion about this case. In the first place, you do not state the age of the patient, nor do you tell us anything of his physical condition prior to the time he presented himself for treatment and when food was withheld; neither have we any knowledge of the length of time food has been denied him. The disease-process may have so weakened the individual that the withholding of nutrition for but even a short time might cause death from inanition; on the other hand, if there was absolute obstruction of the intestine, the giving of food whatever might have hastened death. Essential points: Was an autopsy held and the nature of the intestinal

lesion causing constipation definitely ascertained?

Witthaus and Becker, in "Medical Jurisprudence," under the head of "Acute Starvation," say: "The complete deprivation of food induces a series of modifications of the functions of the body differing somewhat from those developed by a partial or prolonged deprivation. The length of time during which complete absence of food can be endured varies with circumstances."

As you will readily understand that the robust, so far well-nourished individual will stand starvation much longer than one weakened by disease.

After absolute stoppage of the food supply, all sensations of hunger pass away after the first day or two, and the hunger then is succeeded by profound functional disturbances and development of weakness and depressing sensations over the epigastric region, accompanied by distressing thirst. The mouth is dry; the tongue is heavily coated; breath, fetid; skin, harsh and dry, and exhales a disagreeable odor. The feces become more and more scant, until toward the later days of life, when a diarrhea of an acid character supervenes. The face and extremities become emaciated; urine is small in amount, and acid; muscular feebleness increases until inability to move supervenes. There is ringing in the ears, insomnia, hallucinations; delirium and convulsions frequently precede death. The latter symptoms are not uniformly observed.

Loss of weight is, of course, the most striking and most constant symptom of starvation. It must be remembered that a very considerable loss of tissue can be sustained by the ordinary individual without fatal result. It is difficult to discuss an exact period for the duration of life in complete deprivation of food, or acute starvation; and it is more difficult where the modifying circumstances are increased in number and complexity.

The conclusion has been reached by competent observers that the healthy adult totally deprived of food and water can exist no longer than ten or twelve days; yet, within recent years, a young man stowed away upon a steamer recovered after being deprived of food and water for eleven days. Caspar reports a similar case. Miners who have been imprisoned for eight, nine or ten days without food and water have recovered. Infants bear starvation badly, and the aged, also, can not endure starvation for many days.

If water is permitted, the length of the interval before death supervenes is materially increased. Tanner and Succì are supposed to have received no food for forty days, but water was consumed freely. Of late, numerous like experiences have been reported in the press.

It must be remembered that certain abnormal conditions may obtain, where the activity of the vital functions is considerably lowered and various processes of the economy are in a condition of semisuspension; in such cases, a supply of food may be suspended for several days with little resultant emaciation.

We naturally would suppose that an individual suffering from volvulus or intussusception, unrelieved by surgical treatment and already weakened by the use of purgatives, would succumb speedily from inanition. In such a case, the intestinal canal being impermeable (and bear in mind that the location of the obstruction has something to do with the length of time the man might live), the giving of ordinary food might hasten death, whereas life might be prolonged by the careful administration of concentrated fluid nutrients by mouth or rectum.

You ask, "Would it not be advisable to stop feeding until the intestinal tract was opened up so that substances could pass through?" Such a question cannot be answered categorically. Certainly we should not give solid foods to a patient suffering from acute obstruction; and purgatives here are not only useless but positively harmful. If you care to give us more definite data, we possibly can discuss the subject more intelligently.

QUERY 5907.—"Hair-Tumor or Dermoid Cyst?" H. B., Michigan, inquires whether we ever have heard of a hair-tumor in the alimentary canal. He has under his care a woman "who always has to spend considerable time in defecation and who sometimes voids a slimy material which may contain skin shreds or, also, one or more small bundles of hair of the kind that grows on the pubes or in the axillæ. The hairs sometimes are brownish, sometimes whitish, sometimes black. The woman weighs about 220 pounds, is a hearty eater, and she does housework. She never had children. Her mother died of 'cancer of the liver,' having had 65 gallstones removed by operation the year before she died. One of her aunts (on mother's side) died of uterine cancer. All the relatives on the father's side reached eighty

years of age. She resembles her mother. She complains of having a 'dead-weight' feeling in the small of her back."

The present writer not only has heard of but has treated patients who harbored small "bundles," or rather collections, of hair in the intestinal canal. You know, neurotic and insane women, or even chlorotic girls, often will eat hair. As you may be aware, enormous masses of hair have occasionally been found in the intestines of cows. Their hair, however, being short, is less apt to mass than that of the human being.

A dermoid cyst may, of course, be present in this woman. These cysts may contain such foreign substances as bone, hair, teeth, and so on. Such cysts are not extremely rare, but the remarkable tumor-like masses of swallowed hair that have been reported as occurring in hysterical women are regarded as clinical curiosities. This condition, moreover, is rarely recognized until there is an operation, although the history may give rise to a suspicion of the character of the mass.

It is just possible that in this case a dermoid cyst has become adherent and opens into the intestine, whence the contents are being discharged. The fact that this woman has never borne children would tend to confirm the correctness of such a diagnosis.

It would be well, we think, for you to send a specimen of mucus and hair voided to a good pathologist. At the same time make a careful physical examination. See whether you can discover by deep palpation the presence of any abnormal body. Exploration of the rectum with reflected light might prove informative. The wisest procedure would be, of course, to have your patient submit to a searching examination, under anesthesia if necessary. You do not say how long these abnormal conditions have been observed. This is an interesting case, and we shall appreciate a further report.

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QUERY 5908.—"Tinea Circinata or Lichen Annularis?" T. D. F., Georgia, writes:

"After reading your journal for some years and finding so much 'good stuff' in it, I venture to describe a case now on hand and ask you to give me some help. I have made a diagnosis of ringworm. The rings began to appear on the wrist, both anteriorly and posteriorly, five years ago. They are from one-half to one inch in diameter, some round and some oblong in shape. The rings are red and smooth; the area inside is white and seemingly bloodless. They itch only occa-

sionally, but each year some new rings have appeared, and they remain. The patient is a woman twenty-one years old and a blonde. She has no other trouble, being in perfect health, except for a little indigestion and marked constipation. I have tried all of the usual remedies for ringworm, and several other doctors have treated her for the trouble, but without any relief whatever. I must say that, in my judgment, your journal contains more useful information for the busy doctor than any other medical periodical I have ever read. I take three other journals, but I prize CLINICAL MEDICINE more than I do all the others combined."

We are not sure that you are dealing with tinea circinata in this instance. We must think, in this connection, of lichen annularis, a typical ringed eruption of the extremities. In this disease the border itself is raised slightly above the surrounding skin. The enclosed skin of the area may look normal or present a pale ivory-like appearance.

The lesions usually begin as small papules or nodules in the center of the area now affected and advance by peripheral increase. The disease persists, sometimes, for years. There are variant forms. The treatment with the arsenates and the local application of a 2-percent salicylic-acid preparation usually proves curative.

In tinea circinata we observe one or more slightly elevated, limited, scaly, hyperemic spots, which spread uniformly, and peripherally, with a tendency to clear up in the central portion, until a ring-like aspect is presented. The central portion generally is pale-red and slightly scaly. The outer portion is elevated, though rarely to a conspicuous degree, and decidedly hyperemic and somewhat scaly. After reaching one-half to several inches in diameter, they remain stationary, but usually disappear spontaneously after a few weeks.

The most frequent sites for the ringworm are the face, neck, hands and forearm; the face, neck and upper chest being involved more frequently than other areas.

In order to arrive at a definite diagnosis, we suggest that you forward scrapings from the edges to our pathologist for microscopical examination.

Should this be a case of ringworm, you cannot do much better than to saturate your patient with calcium sulphide, first "cleaning up" thoroughly internally and externally. We suggest calomel, podophyllin and irisoid, taken at 8 and 10 o'clock every other night for a week, and a laxative saline the next

morning. Give calcium sulphide, 1-6 grain, every two hours during the waking day, and the triple arsenates in full dosage after meals. Bathe the body thoroughly, two or three times a week, with epsom-salt solution; then paint over the lesion with liquefied carbolic acid, and in one minute neutralize this with alcohol. Twice a day rub in a little carbenzol ointment. Or you may apply, once only, a 10-percent ointment of chrysarobin. We have had excellent results with both methods. The application of oil of turpentine often proves curative.

We note with great pleasure your approval of CLINICAL MEDICINE. It is our aim to make each successive issue better than the preceding one, and believe that the busy doctor prefers to read practical articles that will help him in his field-work, rather than abstruse subjects.

QUERY 5909.—“Partial Impotence in Man of Seventy.” W. B. R., Mississippi, “desires to interest us in a case of partial impotence in a man of about seventy years of age.” The doctor begs us not to say that this is to be expected as a natural consequence of age, for the patient is in perfect health, mentally and physically, and has no prostatic trouble, although he contracted gonorrhea twice in his early life. “In fact, he is a perfect specimen of manhood, save for the impotence. He claims that he can accomplish the act several hours after going to bed.” Now, our correspondent goes on, “why should this faculty fail, while all else is normal? There is no lack of semen, for he states that sometimes, failing to have an erection, there is a discharge of semen under the excitement.”

You ask us, doctor, not to say that “partial impotence is to be expected in a man of seventy.” But we do assert, unqualifiedly, that under the circumstances your patient has every reason to feel gratified at his present condition, the more so, as he has had gonorrhea twice. As we have so often pointed out in these columns, men vary materially. There are, if we may so express it, “basswood men,” “pine men,” and “oak men”; but every individual must sooner or later begin to decline, and nature very wisely first diminishes the desire, then renders it impossible for the decaying individual to reproduce his kind.

We are aware, of course, that men have (presumptively) become fathers at the advanced age of eighty years; on the other hand, we have seen large numbers of men practically impotent at fifty. Moreover, we

have had occasion to observe the children begotten of some very old men, and they were not pleasant objects to contemplate. Let us go a little further. A man of seventy living with his wedded wife naturally would have a mate whose sexual life has ended; and a septuagenarian is not a desirable mate under any terms whatever for a young or a still sexually active woman. There is more or less degeneration of the arteries at this age, and you must know, as this writer knows, that some of the startling “sudden deaths” of old men have occurred during cohabitation with young women.

“Man has his spring, his summer, and his winter,” and it is impossible, even were it desirable, to stay the procession of the seasons. It is true that a good heredity and normal living in the springtime of life may prolong the summer, or even enable the individual to enjoy a species of Indian summer, but the powers will fail, the arteries harden, and cell reproduction cease. Thinning hair, falling teeth, imperfect digestion, and waning strength warn men of the approaching end. He who is wise will conserve his strength and realize that, even were it possible, it is not desirable to reproduce when he can never live to protect his progeny, which, moreover, inevitably would be physically handicapped.

Cohabitation without intent of reproduction in a man of three-score years and ten is, to say the least, undesirable. He has had his seed-time and his harvest, and it is evident that the Great God has been extremely good to him or he would not be alive and able even to contemplate such procedure. However, we are fully alive to the fact that each individual has his own ideas upon this subject. All the physician can do is to point out the most desirable and safest road.

The mere fact that there is desire does not prove physical capacity; in fact, the existence of desire in men of this age may evidence some pathologic condition, and to stimulate still further this erethism is like throwing oil upon a dying fire. The burst of flame which follows may be bright for a few moments, but in a very short time all available fuel will be consumed, and with a last flicker the fire will die out and nothing remain but the cold ashes.

The most effective remedies for your patient under the circumstances, would be nucleinated phosphates and neuro-lecithin. The use of the faradic current and alternate cold and hot sponging of the perineum might also be tried.